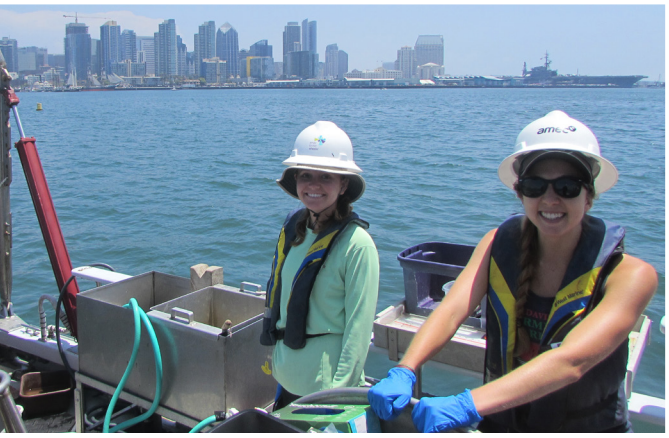
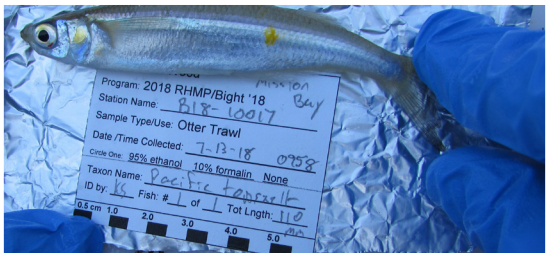
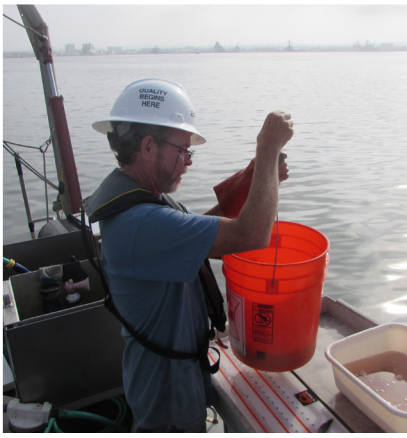
2018 Regional Harbor Monitoring Program
Fish Bioaccumulation Study
FINAL REPORT







Prepared for:

PORT of SAN DIEGO

THE CITY OF SAN DIEGO • STATE OF CALIFORNIA • SEMPER VIGILANS

CITY OF OCEANSIDE INCORPORATED 1888

COUNTY OF ORANGE CALIFORNIA

March 2021

wood.

Environment & Infrastructure Solutions, Inc.
9177 Sky Park Court
San Diego, California 92123

2018 REGIONAL HARBOR MONITORING PROGRAM
FISH BIOACCUMULATION STUDY

FINAL REPORT

March 2021

Prepared for:
Port of San Diego
City of San Diego
City of Oceanside
County of Orange

Authors:
Kevin Stolzenbach[1], Kate Buckley[1], Chris Stransky[1], Marisa Swiderski[1],
Kelly Tait[2], Karen Holman[2], Annabelle Burruss[2], Ruth Kolb[3], Cara Nager[3],
Ryan Rodman[4], and Rita Abellar[5]

Wood Environment & Infrastructure Solutions, Inc.[1]
Port of San Diego[2]
City of San Diego[3]
City of Oceanside[4]
County of Orange[5]

Acknowledgements:

This effort was made possible with generous funding by the RHMP Agencies. Special thanks to the lead agency participants for input throughout: Kelly Tait, Karen Holman, and Annabelle Burruss of the Port of San Diego, Ruth Kolb and Cara Nager of the City of San Diego, Ryan Rodman, Justin Gamble, and Mo Lahsaiezadeh of the City of Oceanside, and Rita Abellar and Cindy Rivers of the County of Orange.

Special thanks as well to all of the exceptional support provided to implement the program and prepare this report: Captain Bob Lohrman and Kenny Nielsen of Seaventures for field vessel and sampling support; Mark Baker, Misty Mercier, Rich Gossett, Rich Hanken, and the rest of the crew at Physis Environmental Laboratories for chemical analysis support; Pei Geng, Linda Rauto, and rest of the crew at Laboratory Data Consultants for data validation support; Autumn Bonnema of Moss Landing Marine Laboratories and the SWAMP crew for collaboration on fish collections and all of the tissue processing, and Karen McLaughlin, Ken Schiff, and Ashley Parks of the Southern California Coastal Water Research Project for collaborative project management, data analysis and reporting support; Tyler Huff, John Rudolph, and Jeremy Burns of Wood for field support; and Barry Snyder for program management support.

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES (continued)

LIST OF FIGURES (continued)

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

>	greater than
<	less than
≤	less than or equal to
µg/g	microgram(s) per gram (parts per million)
%	percent
±	plus or minus
§	Section
Amec Foster Wheeler	Amec Foster Wheeler Environment & Infrastructure, Inc.
ATL	advisory tissue level
ATSDR	Agency for Toxic Substances and Disease Registry
Bight ’13	Southern California Bight 2013 Regional Monitoring Program
Bight ’18	Southern California Bight 2018 Regional Monitoring Program
BOG	Bioaccumulation Oversight Group
BSAF	biota to sediment accumulation factor
CDFW	California Department of Fish and Wildlife
CLP	Contract Laboratory Program
cm	centimeter(s)
COPC	contaminant or chemical of potential concern
CRM	certified reference material
CTL	critical tissue level
DDT	dichlorodiphenyltrichloroethane
DEQ	Oregon Department of Environmental Quality
DQO	data quality objective
dw	dry weight
EDD	electronic data deliverable
EFSA	European Food Safety Authority
ELAP	Environmental Laboratory Accreditation Program
FCG	fish contaminant goal
km	kilometers
km^2	square kilometers
LCS	laboratory control sample

ACRONYMS AND ABBREVIATIONS (continued)

LCSD	laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
LOEC	lowest observed effect concentration
m^2	square meter(s)
MCB	Marine Corps Base
MDL	method detection limit
MLLW	mean lower low water
mm	millimeter(s)
m/sec	meter(s) per second
MRL	minimum risk level
MS	matrix spike
MSD	matrix spike duplicate
ng/g	nanogram(s) per gram (parts per billion)
NIWC	Naval Information Warfare Center
NOEC	no observed effect concentration
NPDES	National Pollutant Discharge Elimination System
OEHHA	Office of Environmental Health Hazard Assessment
oz	ounce(s)
PAH	polycyclic aromatic hydrocarbon
PARCC	Precision, Accuracy, Completeness, Comparability, and Representativeness
PBDE	polybrominated diphenyl ether
PCA	principal components analysis
PCB	polychlorinated biphenyl
Physis	Physis Environmental Laboratories, Inc.
ppb	part(s) per billion
ppm	part(s) per million
PSMFC	Pacific States Marine Fisheries Commission
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RecFin	Pacific Recreational Fisheries Information Network

ACRONYMS AND ABBREVIATIONS (continued)

RHMP	Regional Harbor Monitoring Program
RPD	relative percent difference
San Diego Regional Harbors	Dana Point Harbor, Oceanside Harbor, Mission Bay, and San Diego Bay
SCB	Southern California Bight
SCCWRP	Southern California Coastal Water Research Project
SDRWQCB	San Diego Regional Water Quality Control Board
SDSU	San Diego State University
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SIYB	Shelter Island Yacht Basin
SM	Standard Method
SQO	sediment quality objective
SRM	standard reference material
SWAMP	Surface Water Ambient Monitoring Program
SWHB	Shallow Water Habitat Bioaccumulation
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TOC	total organic carbon
TTL	target tissue level
TVV	Tandem Van Veen
USFWS	United States Fish and Wildlife Service
USEPA	United States Environmental Protection Agency
VRG	Vantuna Research Group
Wood	Wood Environment & Infrastructure Solutions, Inc.
ww	wet weight

This page intentionally left blank

1.0 INTRODUCTION

The primary purpose of this study is to address the core monitoring question of whether the fish are safe to eat in the San Diego Regional Harbors which include Dana Point Harbor, Oceanside Harbor, Mission Bay, and San Diego Bay. To evaluate this question, concentrations of select bioaccumulative contaminants of concern were measured in tissues from resident pelagic and benthic fishes collected during the 2018 Regional Harbor Monitoring Program (RHMP). Sampling of fish in these harbors was leveraged and coordinated with associated efforts in 2018 by the State of California Surface Water Ambient Monitoring Program (SWAMP) and the Southern California Bight 2018 Regional Monitoring Program (Bight '18) as described further below. This supplementary special study to the core RHMP monitoring effort evaluates concentrations of contaminants in fish tissues relative to established human health consumption thresholds, the spatial and temporal relationships of contaminants in fish tissues and their association with local sediment concentrations, and also provides a screening-level ecological risk assessment based on applicable tissue residue effects guideline values. This report supplements additional recent studies that have had a more in-depth focus on bioaccumulative contaminants in the San Diego Regional Harbors in fish and other trophic levels in the food web as they relate to both human and ecological risk (Davis et al., 2012; Bay et al., 2016; Amec Foster Wheeler Environment & Infrastructure, Inc. [Amec Foster Wheeler], 2017a and b; Wood, 2019, and Bay and Parks, 2020).

1.1 Background of the 2018 RHMP

The RHMP provides a comprehensive survey of the quality of water, sediments, and aquatic life on a 5-year cycle in four southern California embayments in the San Diego region: Dana Point Harbor, Oceanside Harbor, Mission Bay, and San Diego Bay. The RHMP was developed in response to a July 24, 2003, request by the San Diego Regional Water Quality Control Board (SDRWQCB) under Section (§) 13225 of the California Water Code to determine whether beneficial uses are being attained and protected in these four major embayments. The RHMP is composed of a core monitoring program and supplementary focused special studies, such as the one reported in this document. The 2018 RHMP was designed to address five core questions from the SDRWQCB's §13225 letter:

1. What are the contributions and spatial distributions of inputs of pollutants?
2. Do the waters and sediments in the harbors sustain healthy biota?
3. What are the long-term trends in water and sediment quality?
4. Are the waters safe for body contact activities?
5. Are the fish in the harbors safe to eat?

Questions 1 through 4 are addressed in the Final 2018 RHMP Report (Wood Environment & Infrastructure Solutions, Inc. [Wood], 2020). Information supporting Question 5 regarding human fish consumption is provided in this report. To address this question this report provides comparisons of measured chemicals in fish tissue to fish consumption guidelines published by the California Office of Environmental Health Hazard Assessment (OEHHA). Note that these values are guidelines only and this report should not be used, nor was designed, to provide a

human health risk assessment. Please consult OEHHA directly for specific guidance related to human health risk related to the consumption of sportfish: https://oehha.ca.gov/fish/advisories.

This effort was coordinated with larger-scale assessments conducted by the State of California in coastal areas throughout the entire state in 2008 and 2018 as described below, and in southern California separately as part of the Southern California Bight 2013 Regional Monitoring Program (Bight '13). The efforts in 2008 and 2018 supported OEHHA's evaluation of contaminant levels in sport fish and issuance of Fish Consumption Advisories for water bodies in California. The California Department of Fish and Wildlife (CDFW), under the auspices of the State Water Resources Control Board (SWRCB) Surface Water Ambient Monitoring Program (SWAMP) Bioaccumulation Oversight Group (BOG) program, conducted their most recent decadal Coastal Fish Survey within the Southern California Bight from June 1 through September 30, 2018, during the same period of time as monitoring for the RHMP. These efforts were closely coordinated by the RHMP, CDFW, and the BOG program to maximize the capture of target species and also provide leverage to increase efficiency and minimize duplication of efforts. While only benthic trawls were used to collect fish for RHMP, the BOG program collected targeted fish species using a variety of gear, including seines, trawls, hook and line, traps, and spears.

Fish tissues were analyzed for a suite of organochlorine pesticides, polycyclic aromatic hydrocarbons (PAHs), polybrominated diphenyl ethers (PBDEs), polychlorinated biphenyls (PCBs), arsenic, mercury, selenium, and percentage of lipids. Biota to sediment accumulation factors (BSAFs) were calculated using sediment chemistry from the 2013 and 2018 RHMP to estimate the linkage between sediments and tissue concentrations of these contaminants of potential concern (COPCs). While BSAFs are a simplistic model that does not fully account for all modes of exposure outside of direct contact with sediments (e.g., respiration of dissolved COPCs and accidental ingestion of particulate-associated COPCs) or potential confounding factors (e.g., site-specific sediment characteristics and/or organism age, diet, physiology, or feeding location [Bay et al., 2016]), the BSAFs assume enough of a linkage with trophic transfer (e.g., invertebrates in the sediment consumed by fishes) and sediment flux into the water column (SCCWRP 2020) to be of value as another tool to assess these relationships. The use of the BSAF is also central to the application of the State of California Sediment Quality Objectives (SQO) framework for assessment of indirect effects to human health from contaminants in sediments (SWRCB 2018).

These data support several data gaps identified during the 2013 RHMP (Amec Foster Wheeler, 2017b) and follow-up efforts in 2014 that focused on shallow-water habitats in San Diego Bay (Amec Foster Wheeler, 2017a). These data will also be used to compare tissue contaminant concentrations over time, although it should be noted that sufficient data is currently not available for a robust statistical analysis or modeling effort to accurately assess trends for individual species or locations. The data may also be used to help fulfill data gaps identified in the State of California SQO Decision Support Tool to evaluate the relationship between contaminants in fish tissue and sediments and associated human health risk.

1.2 Study Purpose

The goal of this study is to provide context to better understand both the risk to human health from the consumption of fish in the San Diego Regional Harbors and ecological risk based on measured tissue concentrations. Assessment of sediment chemistry along with bioaccumulation of COPCs in tissues provides a better understanding of the connection between sediment quality and bioaccumulative compounds measured in fish tissues. Bioaccumulative compounds such as chlordane, dichlorodiphenyltrichloroethanes (DDTs), dieldrin, PAHs, PBDEs, and PCBs, and certain metals such as arsenic, mercury, and selenium are known to accumulate and become magnified through the food web. Previous efforts, including the RHMP and State of California SWAMP in 2008 (reported in Davis et al., 2012), 2013 RHMP (Amec Foster Wheeler, 2017b), the City of San Diego Shallow Water Habitat survey of San Diego Bay (Amec Foster Wheeler, 2017a), a more recent coordinated project to evaluate organochlorine pesticides in fish in San Diego Bay (Wood, 2019 and Bay and Parks, 2020), have collectively quantified levels of PCBs and mercury in fish from the San Diego Regional Harbors at concentrations high enough to exceed certain conservative human consumption guidance values.

This study focused on addressing the following specific primary questions:

1. Is a relationship present between contaminants within the RHMP harbor sediments and resident fish species?
2. How do the contaminant concentrations within harbor sediments and tissues from resident species vary among the four harbors?
3. Do the levels of contaminants within tissues from resident fish species exceed levels of potential concern for ecological effects?
4. Are the fish in the harbors safe to eat[1]?

1.3 Harbor Characteristics

Dana Point Harbor, Oceanside Harbor, Mission Bay, and San Diego Bay are harbors within the San Diego region, each with unique characteristics. Their geography and current and historical uses all have considerable influence on current water and sediment quality conditions. Each harbor supports a variety of critical habitats and associated wildlife, as well as commercial and recreational activities and, in the case of San Diego Bay, industrial activities and national security (the United States Navy).

1.3.1 Dana Point Harbor

Dana Point Harbor is a small, manmade recreational harbor constructed in the late 1960s. Of the four harbors monitored for the RHMP, Dana Point Harbor has the highest overall density of

[1] To address this question this report provides comparisons of measured chemicals in fish tissue to fish consumption guidelines published by the California Office of Environmental Health Hazard Assessment (OEHHA). Note that these values are guidelines only and this report should not be used, nor was designed, to provide a human health risk assessment. Please consult OEHHA directly for specific guidance related to human health risk related to the consumption of sportfish: https://oehha.ca.gov/fish/advisories.

resident commercial and recreational vessels. The harbor is divided into two main regions, northern and southern, with approximately 2,500 boat slips in an area encompassing approximately 0.35 square mile (0.9 square kilometer [km^2]). The entire perimeter of the harbor is surrounded by a rip-rap boundary, except for a sandy beach near the northern end of the embayment referred to as Baby Beach. There are multiple municipal storm drain inputs into Dana Point Harbor; however, none are directly from major watershed sources.

1.3.2 Oceanside Harbor

Oceanside Harbor is another small, manmade recreational harbor, created around the same time (1963) as Dana Point Harbor. This harbor is divided into two main sections, northern and southern, but is also connected to a third basin farther north that is operated by Marine Corps Base (MCB) Camp Pendleton. This basin on MCB Camp Pendleton was not assessed under the RHMP. The harbor, excluding the northern Marine Corps Basin, has approximately 800 boat slips in an area encompassing 0.11 square mile (0.28 km^2). The entire perimeter of Oceanside Harbor is surrounded by a rip-rap boundary. There are multiple municipal storm drain inputs into Oceanside Harbor; however, none are directly from major watershed sources.

1.3.3 Mission Bay

Larger in size (approximately 3.9 square miles [10 km^2]), and more diverse in physical characteristics than Dana Point and Oceanside Harbors, Mission Bay was historically a natural shallow embayment that was substantially modified by dredging and filling operations that occurred in the late 1940s. Mission Bay is a popular recreational area, with six marinas, several resorts, a golf course, and the Sea World Marine Park located within its immediate boundaries. Mission Bay has 27 miles (43 kilometers [km]) of shoreline, 19 miles of which are sandy beaches, with eight locations designated as official swimming areas.

Physical characteristics vary greatly throughout Mission Bay. The entrance and western portions of the bay receive substantial open ocean influence through tidal flushing and are predominantly lined with rip-rap. Conversely, the eastern portion of the bay is predominantly lined with sandy beaches but is constrained geographically with reduced water movement and exchange, particularly in the far inner reaches (Kinnetic Laboratories, 1994). With the exception of the channel entrance and the semi-enclosed marina in Quivira Basin, the depth of the bay is relatively constant, between 1 and 3 meters mean lower low water (MLLW), throughout. Mission Bay's extensive sloping sandy shorelines and the shallow bottom in many areas provide abundant eelgrass bed habitat throughout much of the bay.

Mission Bay is used primarily for recreation. There are approximately 1,800 permanent boat slips in nine marinas and several mooring locations throughout Mission Bay. Mission Bay has approximately 100 storm drain inputs, all with dry weather flow interceptors, and three watershed inputs from Rose Creek, Cudahy Creek, and Tecolote Creek, which are all located in the eastern portion of the bay and drain a collective watershed area of 80 square miles (207 km^2).

1.3.4 San Diego Bay

The largest and most diverse of the four harbors, San Diego Bay is a natural embayment that has been modified over time by dredging and filling operations that began in the early 1900s. It is unique among the harbors monitored for the RHMP because it is used for both recreation and industry and is the only harbor in this study with industrial/port activity. San Diego Bay is 15 miles (24 km) long and varies from 0.2 to 3.6 miles (0.3 to 5.8 km) in width. It is 17 square miles (44 km^2) in area at MLLW (Wang et al., 1998). The larger size and multiple uses of San Diego Bay create smaller micro-environments that may vary greatly from the mouth to the southern portion of the bay. Because of its large size and regional variability, San Diego Bay for this study was split into two geographical ecoregions representing the north and south San Diego Bay for comparative analysis, divided where the Coronado Bay bridge crosses the bay.

San Diego Bay is unique among the harbors monitored for the RHMP because of its historical usage and the extent of previous impacts to the marine environment within the bay. San Diego grew rapidly in the 1880s, with the establishment of several military installations, and over the next few decades, the population and industry grew rapidly (Canada, 2006). Today, San Diego Bay has a large working waterfront, as well as several military facilities. The San Diego International Airport is also adjacent to the bay. Recreational boating is a large component of the activity on the bay, with numerous marinas throughout, as well as several offshore anchorages. As the largest estuary in southern California, San Diego Bay provides critical habitat for both marine and estuarine fish species. The bay also provides extensive shallow water eelgrass habitat that supports unique assemblages of fishes, as well as important nursery habitat for juvenile fishes (Vantuna Research Group [VRG], 2019).

Approximately 200 municipal storm drains as well as six urban rivers/creeks (Sweetwater River, Otay River, Switzer Creek, Chollas Creek, Paleta Creek, and Paradise Creek) contribute watershed inputs into San Diego Bay (City of San Diego, 2013).

1.4 Historical Bioaccumulation Investigations in RHMP Embayments

As described in Section 1.2, there have been several recent associated efforts focused on evaluating the risk of bioaccumulative contaminants to both humans and wildlife in southern California over the past 10 years. The following sections provide a detailed summary of the scope of these efforts.

1.4.1 Contaminants in Fish from the California Coast 2009-2010: Summary Report on a Two-Year Screening Survey (State of California)

A two-year screening survey of contaminants in fish on the California coast was conducted in 2009 and 2010 (Davis et al., 2012). This report presents data from sampling that focused on the North and Central coasts in 2010 and includes data collected as part of the RHMP in 2008. Five species were examined at each sampling location. The array of species selected for sampling included those known to accumulate high concentrations of contaminants and, therefore, serve as informative indicators of potential contamination problems. Contaminant concentrations in fish tissue were evaluated using thresholds developed by California OEHHA for methylmercury, PCBs, dieldrin, DDTs, chlordanes, and selenium, and a United States Environmental Protection

Agency (USEPA) threshold for methylmercury that is being used by SWRCB to identify impaired water bodies. Sampling locations included the four RHMP embayments.

Oversight for this program was provided by the SWAMP Roundtable. The Roundtable was composed of State and Regional Board staff and representatives from other agencies and organizations including USEPA, CDFW, and California OEHHA. Interested parties, including members of other agencies, consultants, or other stakeholders also participate.

The Roundtable formed a committee, the BOG, that guides SWAMP bioaccumulation monitoring. The BOG is composed of representatives from each of the Roundtable groups; in addition, it includes the Southern California Coastal Water Research Project (SCCWRP) and the San Francisco Estuary Institute. The members of the BOG have extensive experience with bioaccumulation monitoring. The BOG also serves as a subcommittee for the California Water Quality Monitoring Council (http:// www.waterboards.ca.gov/mywaterquality/monitoring_council/). The Council's objectives are to promote coordination and cost-effectiveness of water quality and ecosystem monitoring and assessment, enhance the integration of monitoring data across departments and agencies, and increase public access to monitoring data and assessment information.

The goals of the study were to:

1. Define the spatial extent of contamination in fish relative to assessment thresholds developed by regulatory agencies;
2. Evaluate spatial patterns of contamination within regions; and
3. Identify areas where further sampling should be conducted to support development of safe eating guidelines.

1.4.2 Bight '13 and RHMP 2013 Sampling Efforts

The Bight program is a large-scale, ongoing regional study conducted every five years that focuses on understanding the impact of anthropogenic contaminants over time on the ecology of the southern California Bight (Point Conception to the Mexican Border). The RHMP is integrated into the Bight program monitoring. In 2013, the Bight '13 program, in collaboration with the RHMP, initiated a special study that focused on understanding the dynamic of trophic transfer (bioaccumulation) of contaminants through the food web. The study conducted analyses of DDT and its breakdown products, PCBs, mercury, and PBDE (a flame retardant) concentrations in a number of trophic levels, including fish, benthic invertebrates, plankton, and bird eggs in addition to the sediments. A conceptual food web model for the San Diego Regional Harbors is included as Figure 1-1.

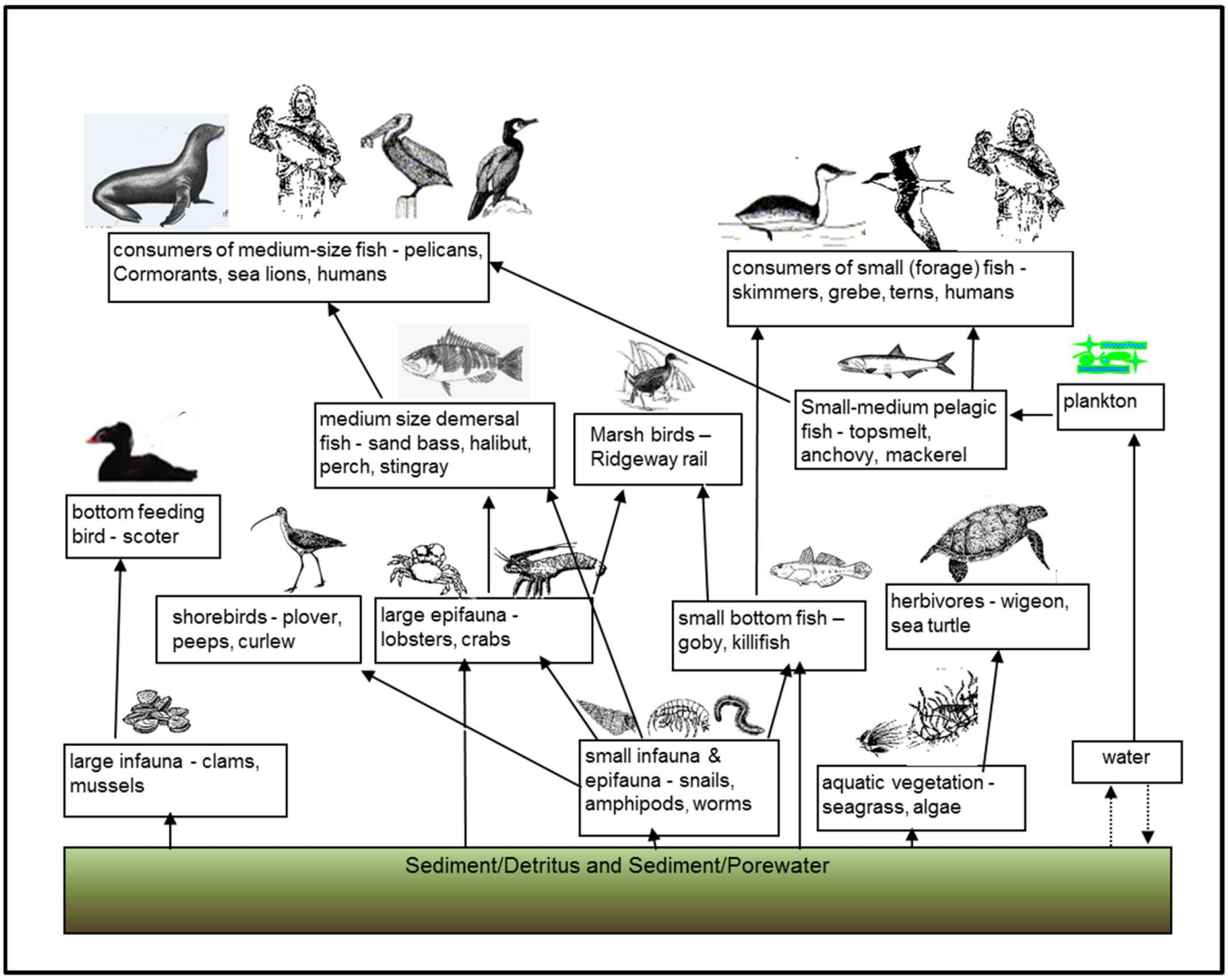


Figure 1-1. Conceptual Food Web Model for San Diego Regional Harbors

Courtesy of Southern California Coastal Water Research Project (SCCWRP)
(*San Diego Bay Bioaccumulation Report – Food Web Bioaccumulation Study*; *Bay et al., 2016 Report*)

The initial concept for this special study was developed for Bight '13 by a collaborative group that included the City of San Diego, Port of San Diego, SCCWRP, San Diego State University (SDSU), United States Fish and Wildlife Service (USFWS), SDRWQCB, Amec Foster Wheeler, and Tetra Tech (the Project Collaboration Group).

Tissue samples from this effort were collected in several embayments including Newport Harbor, Dana Point Harbor, Oceanside Harbor, Mission Bay, and San Diego Bay.

1.4.3 San Diego Bay Bioaccumulation Study Report (SCCWRP and USFWS, 2016)

In November 2016, SCCWRP and USFWS prepared a final report entitled *Assessment of Bioaccumulation in San Diego Bay* (Bay et al., 2016). This study incorporated data collected in San Diego Bay during Bight '13/2013 RHMP. The report addressed four primary study objectives:

1. **Describe bioaccumulation among key components of the San Diego Bay food web.** Two major contaminant exposure pathways were evaluated in the study: bioaccumulation related to predators feeding on sediment-dwelling organisms (benthic pathway) and bioaccumulation related to uptake of contaminants in water column-dwelling organisms (pelagic pathway).
2. **Evaluate risk to avian wildlife from contaminant exposure.** Contaminant concentrations in the eggs of four species of birds were examined: California least tern, Caspian tern, double-crested cormorant, and western gull.
3. **Assess potential risk to human health resulting from consumption of fish from San Diego Bay.** Tissue contamination data for several popular sport fish, including spotted sand bass, California halibut, and Pacific chub mackerel, were compared with consumption advisory levels, and were also evaluated using a draft framework for assessing sediment quality relative to the SWRCB sediment quality objectives. These fish were collected during a separate focused effort funded by the SWRCB whereby legal-sized sport fish commonly caught and consumed by anglers in San Diego Bay were targeted. In June 2015, sport fish tissue samples were collected by volunteer fisherman who participated in a "Fishing for Science" Derby, as well as additional hook and line fishing efforts by staff from SCCWRP and Amec Foster Wheeler.
4. **Evaluate bioaccumulation model performance.** Comparisons were conducted between measured tissue contaminant concentrations and estimated concentrations obtained using the bioaccumulation model proposed to assess attainment of the SWRCB's sediment quality objectives for human health.

The objective of this report was to provide an enhanced assessment of Objective 1 results related to bioaccumulation among key components in the food web of San Diego Bay. In this report, contamination data for sediment, and tissue (forage fish and benthic infauna) were summarized for San Diego Bay by dividing the bay into three ecoregions (north, central, and south) for comparative analyses.

1.4.4 Aquatic Food Web Bioaccumulation Study of San Diego Bay (Amec Foster Wheeler and SCCWRP, 2016)

In 2016, Amec Foster Wheeler prepared a report for the City of San Diego to complement the San Diego Bay Bioaccumulation Study (Bay et al., 2016), entitled the Aquatic Food Web Bioaccumulation Study of San Diego Bay (Amec Foster Wheeler, 2017a)[2]. This study incorporated data collected during Bight '13/2013 RHMP and data collected during the 2014 Shallow Water Habitat Bioaccumulation Study (SWHB Study). The SWHB Study was conducted to supplement the 2013 RHMP shallow water stratum dataset in San Diego Bay, which was identified as a data gap during Bight '13 efforts. During the SWHB Study, Amec Foster Wheeler performed nine otter trawls and nine plankton trawls and collected 30 surface water and sediment

[2] The results of this study may be accessed at: http://www.waterboards.ca.gov/sandiego/water_issues/programs/sdbay_strategy/doc/R0516-074_Food_Web_Bioaccumulation_Study_Report_for_SD_Bay_FINAL_120716_update.pdf

samples from shallow water areas (i.e., less than 12 feet deep) in San Diego Bay. The objectives of the SWHB Study were to answer the following questions:

1. What is the magnitude of bioaccumulation of COPCs in zooplankton, invertebrate, and fish trophic levels in the shallow water habitats of San Diego Bay?
2. What is the spatial distribution of COPCs in sediments, invertebrates, zooplankton, and fish tissues throughout the San Diego Bay?
3. What is the relationship between bioaccumulative COPCs in shallow water sediments, and those observed in the local food web? Do sediments appear to contribute to observed tissue concentrations?
4. What is the spatial distribution of mercury in the water column?
5. What is the relationship among mercury in the water column, bioaccumulative COPCs in shallow water sediments, and COPCs in zooplankton?

In addition, the data from the SWHB Study supplemented sediment chemistry, benthic community, and toxicity data generated during Bight ’13 to enhance spatial variability and trend assessments.

1.4.5 San Diego Bay Fish Consumption Study (2017)

In 2017, SCCWRP prepared a report for the Port of San Diego, City of San Diego, and the SDRWQCB to assist the state of California in the assessment of human health risks associated with consumption of fish from San Diego Bay. Assessment of consumption rates was accomplished via field interviews of anglers at common fishing locations (boat landings, piers, and shoreline locations) surrounding San Diego Bay. The study design was developed to account for both geographically and culturally relevant site selection to ensure adequate coverage of all areas of the bay (northern, central, and southern). Because there are significant disadvantaged communities immediately adjacent to or a short distance from San Diego Bay, it was hypothesized that consumption rates for these communities may be somewhat higher than the general population, for both cultural and/or subsistence use.

The primary goal for this study was to provide comprehensive information about fishing activity, species caught and consumed, preparation methods and sociospatial distribution of the fishing population appropriate for OEHHA to fully assess risk and to inform management decisions for San Diego Bay. The objectives of this study were to answer the following questions:

1. What are the consumption rates for anglers in San Diego Bay, and how does that relate to advisory recommendations?
2. How do socio-economic differences relate to differences in consumption rates?
3. How do consumption rates vary in space and time by location around the bay and time of year?

1.4.6 Occurrence and Bioaccumulation of Dissolved Organochlorines in San Diego Bay (2019)

The objectives of this study were to investigate the contributions of sediment organochlorines (PCBs, DDTs, and chlordanes) to the water column in San Diego Bay and to evaluate the influence of these conditions on biota contamination and bioaccumulation model estimates (SCCWRP 2020). This study was a joint collaborative effort led by SCCWRP and the San Diego Regional Water Board in partnership with the Port of San Diego, City of San Diego, Wood, and Naval Information Warfare Center (NIWC, formally SPAWAR Systems Center).

This report includes a summary of results from a fish tissue contaminant study conducted by Wood (Wood, 2019) as well as preliminary PCB fate analyses by NIWC. These results are combined with chemical analyses of organochlorines in sediment, pore water, and the water column to address the study objectives. Bioaccumulation modeling was used to investigate the relative influence of sediment and water contamination on food web contamination. This report also contains recommendations to improve the use of bioaccumulation models for contaminated sediment assessment and management in San Diego Bay.

2.0 MATERIALS AND METHODS

2.1 Project Location and Sampling Design

This study is a focused examination of the extent and magnitude of bioaccumulation of contaminants in sport fish within embayments in the San Diego region. Sediment, water, and tissue samples were collected during the 2018 RHMP by Wood between July 10 and September 12, 2018. The locations of the 75 sediment and water sampling stations and 15 trawl stations were designated using a probability-based, stratified random sampling approach that was fully integrated into the Bight ’18 program. Sediment sampling and benthic trawl stations were selected by SCCWRP in accordance with the Bight ’18 Sediment Quality Assessment Work Plan (SCCWRP, 2018c). These stations served as locations for both the RHMP and Bight ’18 and were funded by the RHMP agencies. Detailed sampling methodology and station locations are described in the RHMP Core Monitoring Report (Wood, 2020).

The 2018 study reported herein differs from the 2013 RHMP bioaccumulation study in that sample collection of target species was coordinated with efforts by the SWRCB SWAMP to survey sport fish bioaccumulation across the state. Fishing within the San Diego region was led by Wood and CDFW staff using a variety of methods including trawls, seines, hook and line, traps, and spear (Ichikawa, 2018). The state’s expansive coastline was broken into 27 sampling zones, with 5 total zones falling within RHMP embayments. More detailed methodology about the statewide survey design can be found in the final joint Bight ’18 and SWAMP report (McLaughlin et al., 2020 draft; expected final report in spring 2021). Composite areas for sediment and tissues for this study were based on those created for the SWAMP report.

The selection criteria for target fish species were provided by SWAMP and accounted for the high diversity of species, variation in habitat type and quality, variation in contamination, and variation in ecological attributes of indicator species. The following criteria were used to select target species:

1. **Popular for consumption.** This was the primary factor in selecting fish species. Data on recreational fish catch data were collated from the Pacific Recreational Fisheries Information Network (RecFIN), a product of the Pacific States Marine Fisheries Commission (PSMFC), which integrates State and Federal marine recreational fishery sampling efforts (RecFIN, 2020).
2. **Widely distributed.** Range of preferred species extended the length of the Southern California Bight (SCB).
3. **Representative of different exposure pathways.** Both benthic and pelagic feeders were included.
4. **Continuity with previous monitoring efforts** to facilitate comparability with existing monitoring programs.
5. **Consistency with species collected in other parts of the state** as part of the coordinated statewide coastal survey.

Three species were selected as primary target species, while seven species were selected as secondary target species. Primary target species were fished until a sufficient number of specimens were caught, while secondary target species were kept for supplemental analysis in the event that not enough primary target species were captured for each region. Fish species caught across a wide distribution of zones were used in the analysis of regional extent and magnitude of contaminant bioaccumulation. The primary target species were white croaker (*Genyonemus lineatus*), kelp bass (*Paralabrax clathratus*), and Pacific chub mackerel (*Scomber japonicus*). White croaker is predominantly an epibenthic feeder, often associated with soft-bottom sediments. Kelp bass is predominantly a water column feeder, often associated with rocky substrate. Pacific chub mackerel is a water column feeder with a dynamically large range. The secondary target species were California halibut (*Paralichthys californicus*), shiner surfperch (*Cymatogaster aggregata*), yellowfin croaker (*Umbrina roncador*), barred sand bass (*Paralabrax nebulifer*), spotted sand bass (*Paralabrax maculatofasciatus*), olive rockfish (*Sebastes serranoides*), and California scorpionfish (*Scorpaena guttata*). The California halibut and shiner surfperch were selected because they are included in other zones in the statewide survey and in other regional monitoring efforts (e.g., the SWRCB SQO Program). The croaker, bass, and rockfish were selected because they are common in some locations, desirable sportfish for consumption, and they also serve as ecological replacements for primary species (i.e., same ecological niche or guild). The scorpionfish and mackerel were selected because they are frequently assessed in other monitoring programs in the SCB, including National Pollutant Discharge Elimination System (NPDES) monitoring programs.

2.2 Sample Collection and Analysis

Sediment and tissue collection followed methodologies in the RHMP project-specific Work Plan (Wood, 2018b). All field sampling methods for sediment chemistry sample collection were also consistent with the Bight ’18 guidelines in the Bight ’18 Sediment Quality Assessment Field Operations Manual (SCCWRP, 2018b) and Bight ’18 Quality Assurance Manual (SCCWRP, 2018a). Tissue sample processing procedures were consistent with the methodology in the Bioaccumulation Work Plan prepared for the Bight ’18 Regional Marine Monitoring Survey (BOG, 2018).

Tissue composites were created by BOG personnel at Moss Landing Marine Laboratories and chemical analyses of all tissue samples were conducted by Physis Environmental Laboratories, Inc. (Physis) in Anaheim, California. Sediment samples were submitted to Physis for primary constituents of concern.

2.2.1 Sediment Sampling and Analysis and Comparison to Fish Tissue Concentrations

The primary focus of this report is on the COPCs in fish tissue; however, an additional evaluation has also been conducted to evaluate the relationship between COPCs in fish tissue and that in the associated sediment. Biota to sediment accumulation factors (BSAFs) are calculated from these two datasets to evaluate the strength of the relationship between the two measures. While BSAFs result in a relatively simple model that does not fully account for all modes of exposure outside of contact with sediment or for potential confounding factors (e.g., site-specific sediment characteristics and/or organism age, diet, physiology, or feeding location [Bay et al., 2016]), it is

still a valuable tool to explore the relationship between tissue and sediment concentrations To account for varying foraging areas of target sportfish, a minimum site assessment area of 1 km^2 is recommended as provided in the latest Sediment Quality Provisions of the Water Quality Control Plan for Enclosed Bays and Estuaries of California (SWRCB - Beegan and Faick, 2018). These provisions include methods to assess the linkage between sediments and fish tissue for an assessment of human health risk due to consumption of fish in accordance with the SQO Phase II indirect effects approach. Based on this guidance combined with the areas sampled for fish tissue in 2018, sediment chemistry data was averaged across large survey zones that characterized Dana Point Harbor, Oceanside Harbor, and Mission Bay as single separate assessment areas, while San Diego Bay was divided into two assessment areas north and south of the Coronado Bay Bridge. Sediment quality data from both the 2013 and 2018 RHMP were combined to provide a more robust dataset for comparison. For North San Diego Bay the high number of replicates within Shelter Island Yacht Basin in North San Diego Bay were averaged prior to inclusion in the final area composite average to avoid overweighting this area compared to the larger survey zone. This approach captures the likelihood that fish travel over large areas and may be exposed to a range of sediment conditions within each survey zone.

Sediment sampling location maps for the 2013 and 2018 RHMPs are provided in the final reports for the core monitoring program (Amec Foster Wheeler, 2016 and Wood, 2020). Detailed descriptions of collection procedures for sediments, criteria for acceptable samples, and conditions under which samples required re-collection are provided in the RHMP project-specific Work Plan (Wood 2018b). Sediment samples were collected following water grab samples using a 0.1-square-meter (m^2) Tandem Van Veen (TVV) grab sampler. The TVV grab sampler was lowered at <1 meter per second (m/sec) and sample acceptability was determined on the basis of sample condition and depth of penetration of the grab. An acceptable grab for sediment chemistry was characterized by an even surface with minimal disturbance and little or no leakage of overlying water, and a penetration depth of at least 5 centimeters (cm).

Samples were collected from the top 5 cm of sediment using a stainless-steel scoop that was decontaminated between collections. Sediment in contact with or within 1 cm of the metal sides of the grab was avoided to prevent sample contamination. Multiple portions of each grab were serially added to each sample. Physical parameters and chemical analytes measured in sediments discussed in this report are provided in Table 2-1. Full analyte results can be found in the final 2018 RHMP report (Wood, 2020).

Table 2-1.
Chemical Analyses of Sediment Samples Collected During the 2018 RHMP

Analyte	Analysis Method	Sediment Target Reporting Limits [a,b]	Units
Total Organic Carbon (TOC)	USEPA 9060	0.01	%
Arsenic (As)	USEPA 6020/6010B [c]	0.05	µg/g
Mercury (Hg)	USEPA 245.7 [c]	0.02	ng/g
Selenium (Se)	USEPA 6020/6010B [c]	0.05	µg/g
Chlorinated Pesticides [d]	USEPA 8270D/ 8270D-NCI [c]	0.5-50	ng/g
Polycyclic Aromatic Hydrocarbons (PAHs) [e]	USEPA 8270D	5.0	ng/g
Polychlorinated Biphenyl (PCB) Congeners [f]	USEPA 8270D [c]	0.2-10	ng/g
Polybrominated Diphenyl Ethers (PBDEs) [g]	USEPA 8270D-NCI	0.1	ng/g

Notes:
% = percent; µg/g = micrograms per gram (part per million); ng/g = nanograms per gram (part per billion); USEPA = United States Environmental Protection Agency
a. Sediment minimum detection limits are on a dry-weight basis.
b. Reporting limits were provided by Physis Environmental Laboratories.
c. USEPA 1986–1996. SW-846. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition.
d. Includes *2,4'-DDD, 2,4'-DDE, 2-4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, gamma-chlordane, cis-nonachlor, oxychlordane, trans-nonachlor, dieldrin,* 4,4'-DDMU, aldrin, BHC-alpha, BHC-beta, BHC-delta, BHC-gamma, DCPA, Dicofol, endosulfan sulfate, endosulfan-I, endosulfan-II, endrin, endrin aldehyde, endrin ketone, heptachlor, heptachlor epoxide, hexachlorobenzene, methoxychlor, mirex, perthane, and toxaphene. This list includes all chlorinated pesticides measured in the sediment. Those in *italics* were the focus of this report and were used for comparison to tissue.
e. Includes acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnapthalene, 2-methylnapthalene, 1-methylphenanthrene, and 1,6,7-trimethylnaphthalene.
f. Includes congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 174, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209. Note that while not included here, analysis of all 209 congeners would provide a more accurate representation of total PCBs in sediments.
g. Includes PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, and 209.

2.2.2 Analysis of Tissue Samples

A total of 76[3] tissue samples representing commonly captured fish species in the four RHMP harbors were collected and analyzed for contaminants of potential concern related to human and ecological health. Analyses were performed on skin-off fillet muscle tissue for all fish species with the exception of northern anchovy and slough anchovy, in which the entire organism was analyzed, and shiner surfperch, in which the entire organism was analyzed after removal of the head, tail and internal organs. Muscle fillets are recommended by the OEHHA (2005) for large species, and whole fish without head or organs are recommended for smaller species. Upon collection, each fish was tagged with a unique identification number and measured for total length (longest length from tip of tail fin to tip of nose/mouth), fork length (longest length from tail fork to tip of nose/mouth), and weight. During dissection, each fish was sexed, and the weight of tissue recorded. Dissection and compositing of tissue samples was performed following OEHHA guidance (OEHHA, 2005) at Moss Landing Marine Laboratories by SWAMP staff. A total of three composite samples per species were targeted per fishing zone. A total of five specimens were targeted per composite sample. Specimens of legal size or larger were preferred but not required.

[3] Includes two replicate samples.

If more than five specimens were collected, then the middle 75% of the length distribution was used for the composite. Specimens from this interquartile range were selected at random for inclusion in each composite. A list of analytes measured in fish tissues is provided in Table 2-2.

Table 2-2.
Chemical Analyses of Tissue Samples Collected During the 2018 RHMP

Analyte	Analysis Method	Tissue Target Reporting Limit [a,b]	Units
Percent Solids	SM 2540B	0.1	%
Percent Lipids	Gravimetric	0.05	%
Arsenic	USEPA 6020 [c]	0.05	µg/g
Mercury	USEPA 245.7 [c]	0.02	ng/g
Selenium	USEPA 6020 [c]	0.05	µg/g
Chlorinated Pesticides [e]	USEPA 8270D [c]	0.05	ng/g
Polycyclic Aromatic Hydrocarbons (PAHs)	USEPA 8270D	5.0	ng/g
Polychlorinated Biphenyl (PCB) Congeners [f]	USEPA 8270D[c]	0.1	ng/g
Polybrominated Diphenyl Ethers (PBDEs) [g]	USEPA 8270D-NCI	0.1-5	ng/g

Notes:
µg/g = micrograms per gram (part per million); ng/g = nanograms per gram (part per billion); SM = Standard Method; USEPA = United States Environmental Protection Agency
a. Tissue minimum detection limits are based on a wet-weight basis.
b. Reporting limits were provided by Physis Environmental Laboratories.
c. USEPA 1986–1996. SW-846. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, 3rd Edition.
d. Includes acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnapthalene, 2-methylnapthalene, 1-methylphenanthrene, and 1,6,7-trimethylnaphthalene.
e. Includes *2,4'-DDD, 2,4'-DDE, 2-4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, gamma-chlordane, cis-nonachlor, oxychlordane, trans-nonachlor, dieldrin,* 4,4'-DDMU, aldrin, BHC-alpha, BHC-beta, BHC-gamma, DCPA, Dicofol, endosulfan sulfate, endosulfan-I, endosulfan-II, endrin, endrin aldehyde, endrin ketone, heptachlor, heptachlor epoxide, methoxychlor, mirex, and perthane. This list includes all chlorinated pesticides measured in the tissues. Those in *italics* were the focus of this report. Data for the remaining pesticides are included for reference in the laboratory reports provided in Appendix E.
f. Includes congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209. Note that while not performed here, using all 209 congeners would provide a more accurate representation of total PCBs in tissues.
g. Includes PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, and 209.

2.3 Quality Control

Each batch of analyses included QC samples to ensure proper laboratory method performance. The QC methodology followed Quality Assurance Project Plan (QAPP) guidelines used during Bight '18 (SCCWRP, 2018a) and RHMP (Wood, 2018a), which were also consistent with SWAMP protocol. The QC elements included:

- **Calibration Verification.** A new response factor or calibration curve was established for each instrumental batch. A calibration verification standard was analyzed every 12 hours to check the accuracy of the calibration. The control limit for this element was plus or minus (±) 20 percent (%) of the true value.
- **Method Blanks.** A method blank was run with each sample preparation batch (or per every 20 samples) and processed in a manner identical to that for the field samples. For metals, the control limit for blanks was less than the method detection limit (MDL) or less

than 5% of measured concentration the sample. For organics, the control limit for blanks was less than 10 times the MDL.

- **Sample Duplicates.** Analysis of sample duplicates was conducted at a frequency of 5% of the total sample count. The control limit for this element was a relative percent difference (RPD) of no more than 25%.
- **Matrix Spikes and Matrix Spike Duplicates.** Matrix spike and matrix spike duplicates (MS/MSD) were analyzed at a frequency of one per batch or for every 20 samples (whichever was more frequent). For metals, the control limits for MS/MSD were 75–125% recovery and RPD less than or equal to 25%. For organics, the control limits for MS/MSD were 50–150% recovery for greater than 70% of analytes within each class and RPD less than 50% for greater than 70% of analytes.
- **Certified Reference Materials or Standard Reference Materials.** Method accuracy was evaluated through the analysis of either certified reference materials (CRMs) or standard reference materials (SRMs) at a frequency of one per batch or per every 20 samples. For metals, the CRM control limit was 70–130% recovery. For organics, the SRM control limit was 50–150% for greater than or equal to 70% of the analytes.
- **Standards and Standard Recovery.** Quantification standards consisted of either isotope-labeled or structurally similar analogues to the target analytes and were included with every sample analyzed. The control limit for standard recovery was 50–150%.

All analytical data were reviewed for QC performance by the analytical laboratory, SCCWRP, and Wood. In addition, third-party data review was performed by Laboratory Data Consultants, Inc. (LDC). This third-party review included Level II validation of 100% of chemistry results and Level IV validation of 10% of chemistry results. QC sample results not meeting the control limits were flagged and investigated to determine the need for corrective action.

2.4 Data Analysis

2.4.1 Contaminant Reporting

Tissue concentrations of total mercury and organic analytes are reported in parts per billion (ppb) as nanograms per gram (ng/g) wet weight (ww). Tissue concentrations of arsenic and selenium are reported in parts per million (ppm) as micrograms per gram (µg/g) ww. Sediment chemistry results are reported on a dry weight (dw) basis, either as µg/g dw for arsenic and selenium, or ng/g dw for organics and mercury. Results presented in this report focus on those constituents that are known to bioaccumulate across trophic positions, in particular chlordanes, DDTs, dieldrin, PAHs, PBDEs, PCBs, mercury, arsenic, and selenium.

Total concentrations of organic contaminant classes (chlordanes, DDTs, PAHs, PBDEs, and PCBs) were calculated as the sum of all detected analytes within the class. In cases where all class components were non-detect for a sample, the sum value was represented by the highest MDL of any of the class components.

For comparative purposes, chemical concentration data were also lipid normalized in an effort to quantify biomagnification and bioaccumulation in the food web across species types without lipids

as a confounding factor. Regression plots showing relationships between lipid content and COPCs are presented in Appendix C for reference. A number of tissue samples had non-detect values for total chlordanes, dieldrin, PAHs, and PBDEs, so one-half the MDL was used in these cases prior to summing and subsequent statistical analyses.

2.4.2 Feeding Guilds

To evaluate the role of trophic position and diet on the bioaccumulation of COPCs in fish tissue each fish species was assigned to a feeding guild. The guilds were determined using previous work in San Diego Bay (Bond et al., 1999) and diet information from Love (2011). The feeding guilds were assigned as follows:

- Forage Fish – Planktivores: Forage species that feed exclusively on plankton.
- Forage Fish – Mesocarnivores: Forage species that feed on plankton but may also eat fish.
- Predator Fish – Invertebrates: Fish species that prey on benthic invertebrates such as crabs, shrimp, brittle stars, copepods, isopods, amphipods, mysids, polychaetes, bryozoans, clams (and their siphons), barnacles and mussels.
- Predator Fish – Mesocarnivores: Fish species that prey on benthic invertebrates as a significant component of their diet, in addition to fishes. Some species in this category, such as California halibut, may have shifting diets with preference by age, whereby older individuals are more reliant on fishes but also consume benthic invertebrates.

2.4.3 Biota Sediment Accumulation Factors

A BSAF was calculated for total chlordane, DDTs, dieldrin, PAHs, PBDEs, PCBs, arsenic, mercury, and selenium.[4] The BSAF represents the degree of contaminant bioaccumulation in a sample, relative to the sediment, as introduced in Section 2.2.1. The BSAF was calculated as:

$$BSAF = C_{Tis}/C_{Sed}$$

where:

C_{Tis} = tissue contaminant concentration (µg/g ww or ng/g ww)
C_{Sed} = sediment contaminant concentration (µg/g dw or ng/g dw)

BSAF values reported were derived on the basis of associated sediment and tissue results at each of the 5 sampling regions that were considered fish foraging areas defined as Dana Point Harbor, Oceanside Harbor, Mission Bay, North San Diego Bay, and South San Diego Bay.

BSAF values for total chlordane, DDTs, PBDEs, PCBs, arsenic, mercury, and selenium in this report were calculated using both raw (untransformed) concentrations of COPCs, and concentrations that were normalized for TOC content in the sediments and lipid content of the tissues. Normalized BSAFs are presented for chlordanes, DDTs, PBDEs, and PCBs while raw

[4] Dieldrin and PAHs were not detected in any tissue samples; therefore, BSAFs for these analytes are not presented in this report but can be found in Appendix B.

BSAFs are presented for the metals. Limitations of the BSAF model are discussed in more detail in Section 1.1 and Section 3.6. Additional BSAF comparisons can be found in Appendix B.

2.4.4 Human Health Assessment Thresholds

Recognizing that fish provide significant nutritional benefits while also serving as an exposure pathway for several COPCs, California OEHHA developed Advisory Tissue Levels (ATLs) to provide consumption recommendations that are designed "to promote the overall health of the fish consumer. ATLs provide a number of recommended fish servings that correspond to the range of contaminant concentrations found in fish and are used to provide consumption advice to prevent consumers from being exposed to more than the average daily reference dose for non-carcinogens or to a risk level greater than $1x10^{-4}$ for carcinogens (not more than one additional cancer case in a population of 10,000 people consuming fish at the given consumption rate over a lifetime). ATLs are designed to encourage consumption of fish that can be eaten in quantities likely to provide significant health benefits, while discouraging consumption of fish that, because of contaminant concentrations, should not be eaten or cannot be eaten in the amount recommended for improving overall health (as eight-ounce [oz] servings, prior to cooking, per week)" (OEHHA, 2008). Table 2-3 provides ATLs for the number of servings per week (adapted from OEHHA 2008, updated ATLs table 2017). Fish tissue concentrations for mercury, selenium, total chlordane, total DDTs, dieldrin, total PBDEs, and total PCBs are compared to ATL thresholds to assess relative risk of contaminant bioaccumulation to fish consumers in the SCB. For mercury, the more restrictive thresholds are used (ATLs for women ages 18 to 45 and children 1-17). As an example, if a fish species was found to have tissue mercury concentrations of 550 ng/g ww, young women and children should not consume that species; however, women over 45 and men may consume that species but not more than one 8-oz serving per week.

The OEHHA Fish Contaminant Goal (FCGs; in ppb wet weight) are estimates of contaminant levels in fish that pose no significant health risk to individuals consuming sport fish at a standard consumption rate of eight oz per week (32 g/day), prior to cooking, over a lifetime. FCGs prevent consumers from being exposed to more than the daily reference dose for non-carcinogens or to a risk level greater than $1x10^{-6}$ for carcinogens (not more than one additional cancer case in a population of 1,000,000 people consuming fish at the given consumption rate over a lifetime). FCGs are based solely on public health considerations without regard to the counterbalancing benefits of fish consumption (OEHHA, 2008).

Table 2-3. Fish Contaminant Goals (FCGs) and Fish Advisory Tissue Levels (ATLs) for Selected Contaminants

Contaminant	Fish Contaminant Goal (ng/g, ww)	ATLs for the Number of 8-ounce servings per week* (in ng/g ww)							
		7	6	5	4	3	2	1	Do not consume
Mercury (Women 18-45; children 1-17)	220	≤ 31	31-36	36-44	44-55	55-70	70-150	150-440	>440
Mercury (Women > 45; men)		≤ 94	94-109	109-130	130-160	160-220	220-440	440-1,310	>1,310
Selenium	7,400	≤ 1,000	1,000-1,200	1,200-1,400	1,400-1,800	1,800-2,500	2,500-4,900	4,900-15,000	>15,000
PCB	3.6	≤ 9	9-10	10-13	13-16	16-21	21-42	42-120	>120
Chlordane	5.6	≤ 80	80-90	90-110	110-140	140-190	190-280	280-560	>560
DDT	21	≤ 220	220-260	260-310	310-390	390-520	520-1,000	1,000-2,100	>2,100
Dieldrin	0.46	≤ 7	7-8	8-9	9-11	11-15	15-23	23-46	>46
PBDE	--	≤ 45	45-52	52-63	63-78	78-100	100-210	210-630	>630

*Thresholds for concern based on based on assessment of human health cancer or non-cancer risk assuming an 8-ounce (227g) serving size per week prior to cooking (OEHHA 2008, updated 2017).
[+] There are no ATLs for arsenic or PAHs.
-- There is no fish contaminant goal for PBDEs.
> = greater than; ≤ less than or equal to; ng/g = nanogram(s) per gram; ww = wet weight

This page intentionally left blank

2.4.5 Ecological Risk Evaluation

Widely applicable nationwide ecological risk tissue screening levels are not available for bioaccumulative COPCs because of the importance of site-specific environmental conditions, site-specific food web relationships, and species specificity with regard to bioaccumulation and documented effects. However, ecological risk-based screening values are available from a variety of sources that were reviewed for this report. Wildlife risk is typically evaluated using whole body concentrations that includes the filet and carcass, however for this study most sportfish were analyzed using skin-off filets and smaller fish were analyzed either whole (topsmelt and anchovy) or after removal of the head, tail, and guts (surfperch). This means that the analyses reported here with a focus on human health may be an underestimate of concentrations found in the whole body for larger fish, and therefore may underestimate the potential for ecological risk. However, human health screening values are generally conservative with lower thresholds than those for ecological risk and would likely also be somewhat indicative of ecological risk. These thresholds still offer a useful comparison point; however, they should be interpreted with these limitations in mind.

Applicable sources reviewed and referenced herein include the following:

- USFWS: Ecological risk-based screening levels for contaminants in sediments of San Diego Bay (Zeeman, 2004).
- USFWS: Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota of San Diego Bay (Zeeman, 2016):
- Oregon Department of Environmental Quality (DEQ). Guidance for assessing bioaccumulative chemicals of concern in sediment (Oregon DEQ, 2007).
- San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). Total Maximum Daily Load (TMDL) for PCBs in San Francisco Bay, Resolution No. R2-2008-0012.
- SFBRWQCB. TMDL for Selenium in North San Francisco Bay, Resolution No. R2-2015-0048.

While a number of sources were reviewed, note that this is not an exhaustive list of the latest available ecological threshold values and associated studies; however, these references are currently cited for various programs and used for regulatory decision-making on the United States West Coast.

This page intentionally left blank

3.0 RESULTS

Results are presented as follows after a summary of special considerations related to fish movement in Section 3.1: fish capture locations (Section 3.2), a summary of sediment quality conditions averaged by sampling regions (Section 3.3), and a summary of tissue concentrations by chemical class (Section 3.4). This section includes comparisons to human health and ecological risk thresholds. An exploratory analysis of the relationships between tissue chemical concentrations among different regions, feeding guilds, and species is included in Section 3.5. An evaluation of the relationship between tissue concentrations and sediment concentrations follows in Section 3.6, and finally historical comparisons of fish tissue concentrations recorded over the past 10 years for the San Diego Regional Harbors is provided in Section 3.7. A quality assurance and quality control (QA/QC) summary caps the end of the results in Section 3.8.

3.1 Consideration for Fish Movement

This study recognizes that many fish species are highly mobile, and thus tissue concentrations will reflect an exposure to a range of sediment contaminants reflective of their home range over which they occur. For some species, the home range may be smaller than the site, thus all of the exposure occurs within that area, while others may have a home range that extends beyond the site resulting in exposure to contaminants that are not associated with the site which can impact the assessment of site linkage. Spatial variability in sediment chemical concentrations (e.g., heterogeneity, gradients, or hotspots) and differences in habitat quality that influence foraging activity (SWRCB 2018, Hixon 1981), such as preference for ecotones such as sandy flat bottoms (Espinosa et al. 2011), rock-sand interfaces (Mason and Lowe 2010, McKinzie et al. 2014) or rocky/reef habitat (Lowe et al. 2003) can also affect the movement patterns of species of interest. Other factors that can influence site-linkage for some species are seasonal migration patterns, such as spawning aggregations of barred sand bass (Mason and Lowe 2010, McKinzie et al. 2014) and winter emigration from bays by leopard and smooth-hound sharks (Carlisle and Starr 2009, Espinosa et al. 2011), in addition to temperature-driven aggregations that seasonally can increase the movement of species like round rays (Meese and Lowe 2019, Vaudo and Lowe 2006). The mode of feeding (e.g., ambush predator, roaming benthic foraging, pelagic filter feeding on plankton) are also likely to impact the extent to which a species moves around, and these may vary within feeding guilds. A summary of home ranges and established statistical relationships in the literature between tissue concentrations and the distance to which they correlate with sediment concentrations are presented in Table 3-1 for the species analyzed in this report. Where available, additional detail about habitat preference and movement patterns are summarized.

This page intentionally blank

Table 3-1. Home Range Parameters for Fish Species Analyzed

Guild	Species	Home Range Basis	Home Range (Average ± 1SD)	Notes
Forage - Planktivores	Northern Anchovy	NA	NA	NA
	Slough Anchovy			
Forage - Mesocarnivore	Pacific Chub Mackerel	NA	NA	NA
Predator - Inverts	Black Perch	Site Area (km^2)	0.021 - 0.031[a] 0.187 - 0.481[b]	Hixon 1981. Study on Santa Barbara coastal reefs [a]=Permanent, defended territories. [b]=Temporary territories.
	Shiner Surfperch	Site Area (km^2)	0.0012 ± 0.0008	CWQCB 2018. SOA[1] in San Francisco Bay for chlordanes, dieldrin, total DDTs and total PCBs=1 km
	Salema	NA	NA	NA
	Spotfin Croaker			
	White Surfperch			
Predator - Mesocarnivore	Barred Sand Bass	Site Area (km^2)	10.0 ± 3.8	Mason and Lowe 2010. Study conducted inside MPA at Catalina
		Site Area (km^2)	0.139 ± 0.370[c] 0.003 ± 0.001[d]	McKinzie et al. 2014. [c]=spawning season fish tracked in nearshore shelf 15-30m depth. [d]=non-spawning season fish tracked near federal breakwater near POLA/POLB
	Spotted Sand Bass	Site Area (km^2)	7.1 ± 7.3	CWQCB 2018
	Kelp Bass	Site Area (km^2)	3.3 ± 3.3	Lowe et al. 2003. Study in Catalina MPA. High degree of site fidelity, preference of rock and kelp habitat
	California Halibut	Site Length (km)	29.3 ± 60	CWQCB 2018. SOA[1] in San Diego Bay for total DDTs and total PCBs=4 km
	White Croaker	Site Area (km^2)	3 ± 4.7	CWQCB 2018. SOA[1] in San Francisco Bay for chlordanes=5 km, dieldrin and total PCBs=1 km
	Queenfish	Site Area (km^2)	3 ± 4.7	CWQCB 2018
	Leopard Shark	Site Area (km^2)	39.1 ± 7.6	Carlisle and Starr 2009. Study in Elkhorn slough. Seasonal resident of estuaries, leaves in winter
	Brown Smooth-Hound Shark	NA	NA	Seasonal resident of estuaries, leaves in winter (Espinosa et al. 2011, Speed et al. 2010, Campos et al. 2009)
	Round Stingray	Site Area	Tens to a few hundred meters[e]	Meese and Lowe 2019[e] (Big Fisherman's Cove at Catalina). Populations near coastal estuaries and island habitats may aggregate in warmer water and seasonally disperse into adjacent habitats (Meese and Lowe 2019, Vaudo and Lowe 2006).
	California Corbina	NA	NA	Likely similar to other croaker species
	Yellowfin Croaker			
	Black Croaker			

[1] - Spatial Optimization Analysis by Melwani et al. 2009 to determine distance at which linear regression analysis determined a significant relationship between sediment and tissue concentrations. Only significant relationships are presented. NA = Information from literature not available.

This page left intentionally blank

3.2 Fish Capture Locations and Catch Summary

Information for each fish composite (including number and sizes of fish and collection locations) from the 2018 collection effort between RHMP and CDFW (on behalf of the BOG program) can be found in Appendix A. Maps showing 2018 RHMP trawl sampling locations and general collection locations from CDFW are shown in Figures 3-1 to 3-6.

This page left intentionally blank

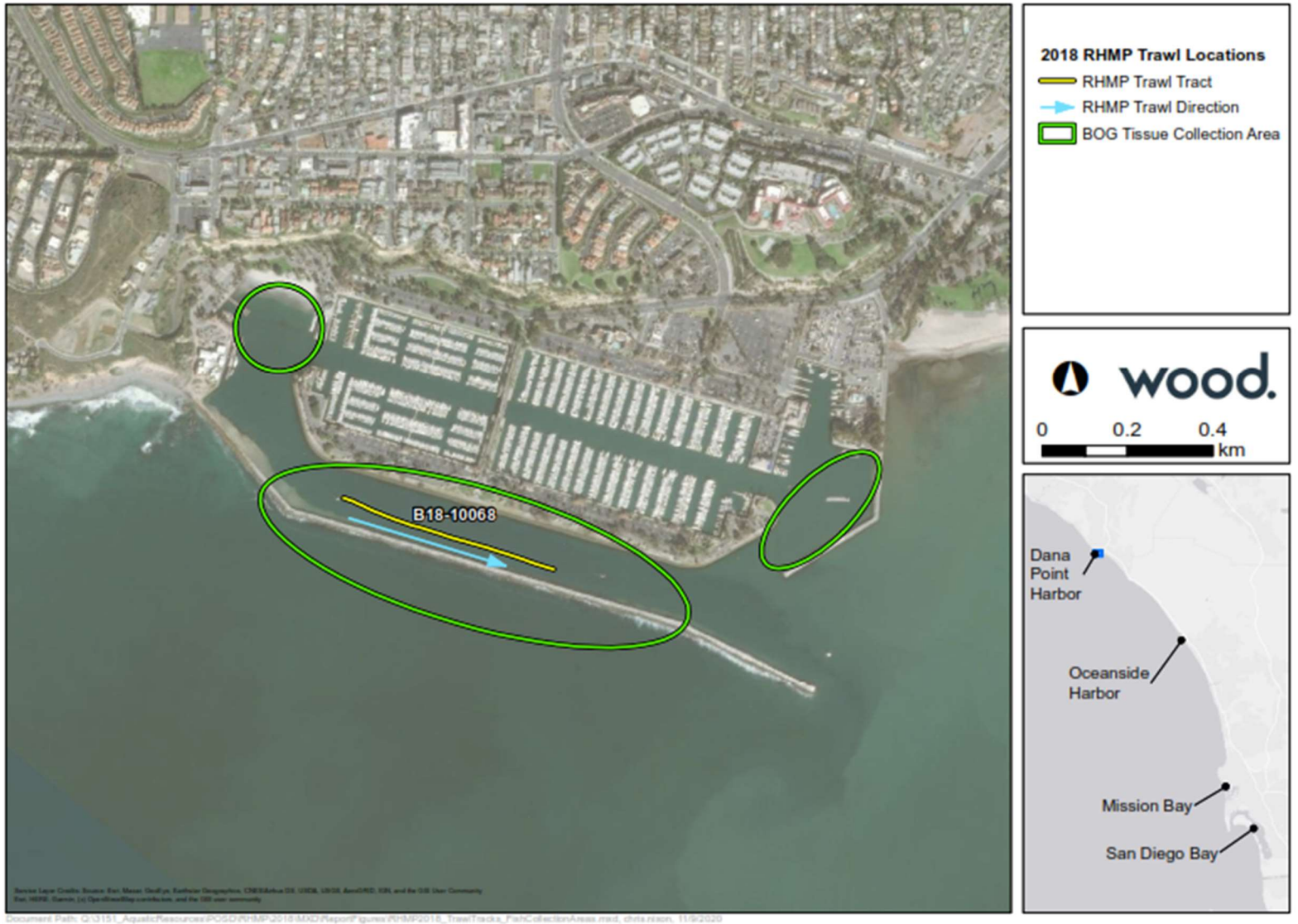


Figure 3-1. 2018 RHMP Trawl Locations and BOG Fish Collection Areas in Dana Point Harbor

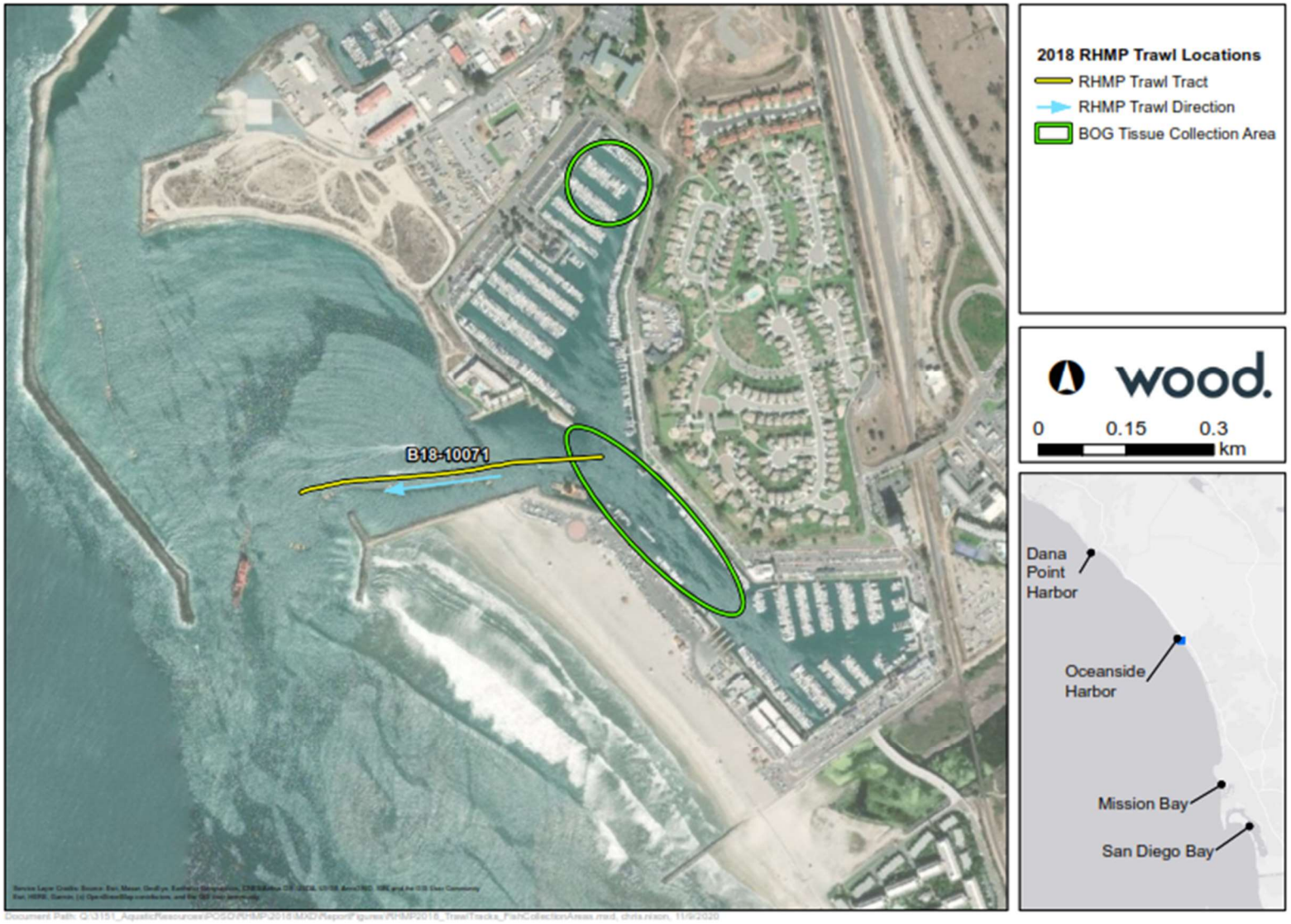


Figure 3-2. 2018 RHMP Trawl Locations and BOG Fish Collection Areas in Oceanside Harbor

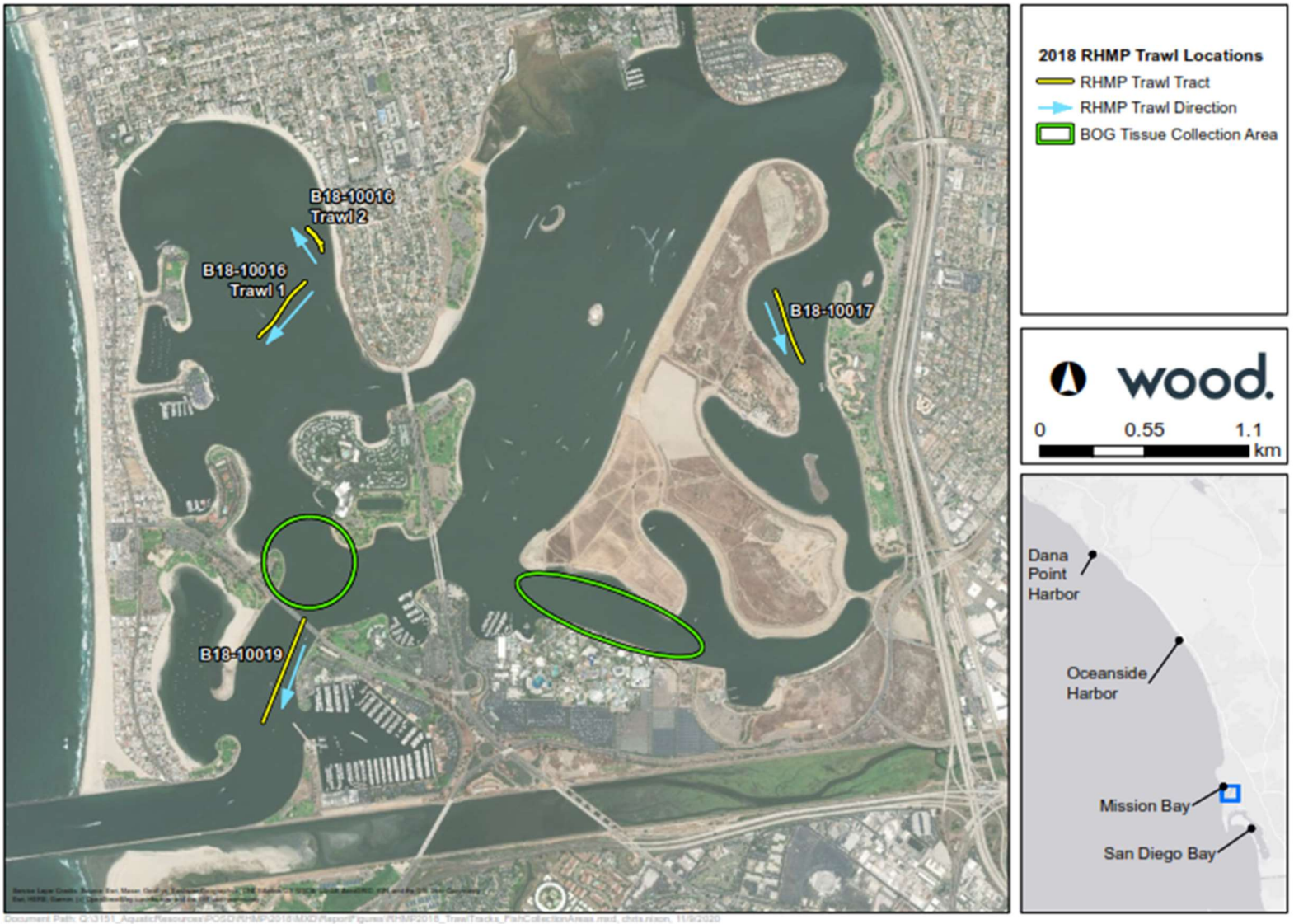


Figure 3-3. 2018 RHMP Trawl Locations and BOG Fish Collection Areas in Mission Bay

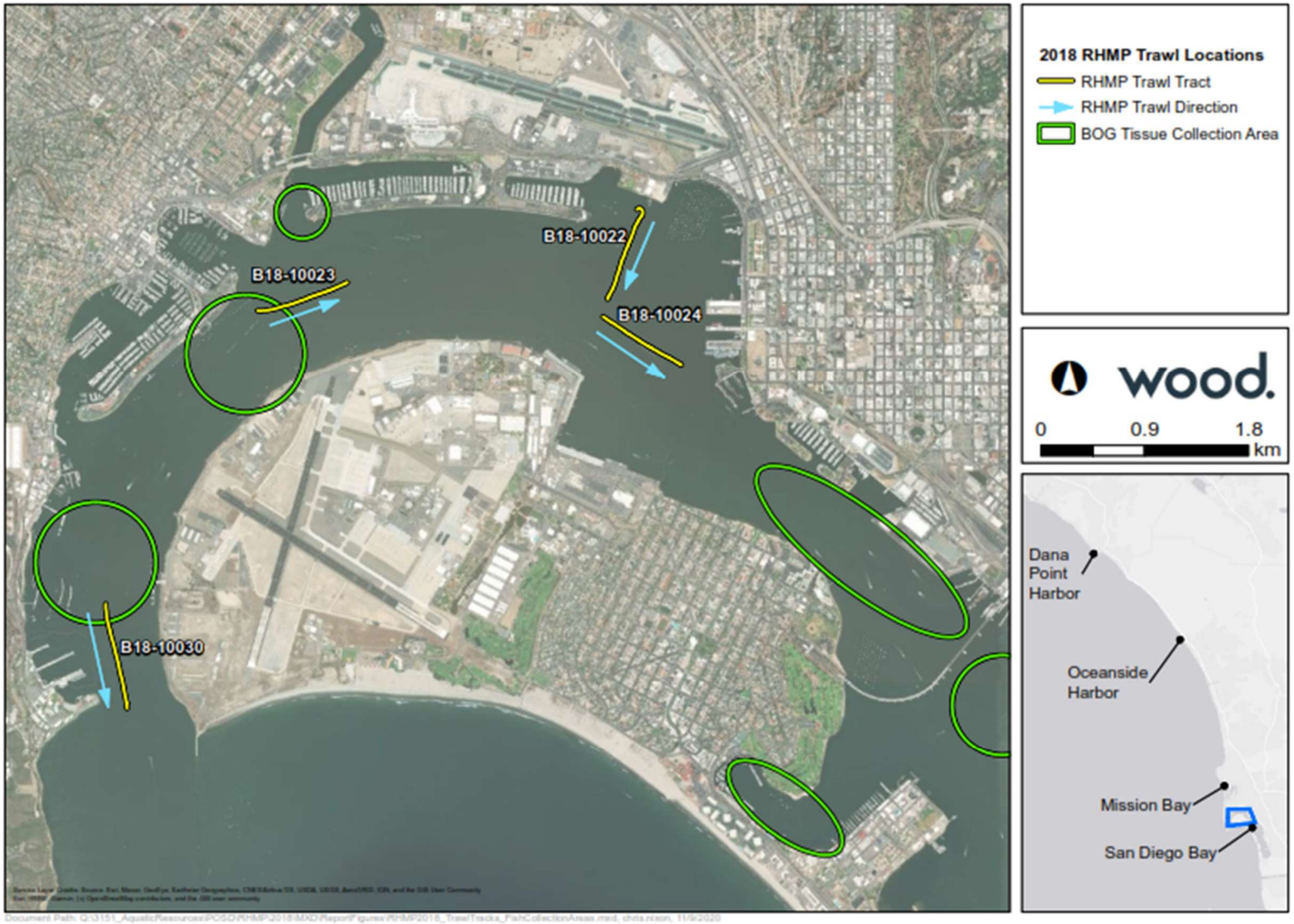


Figure 3-4. 2018 RHMP Trawl Locations and BOG Fish Collection Areas in North San Diego Bay

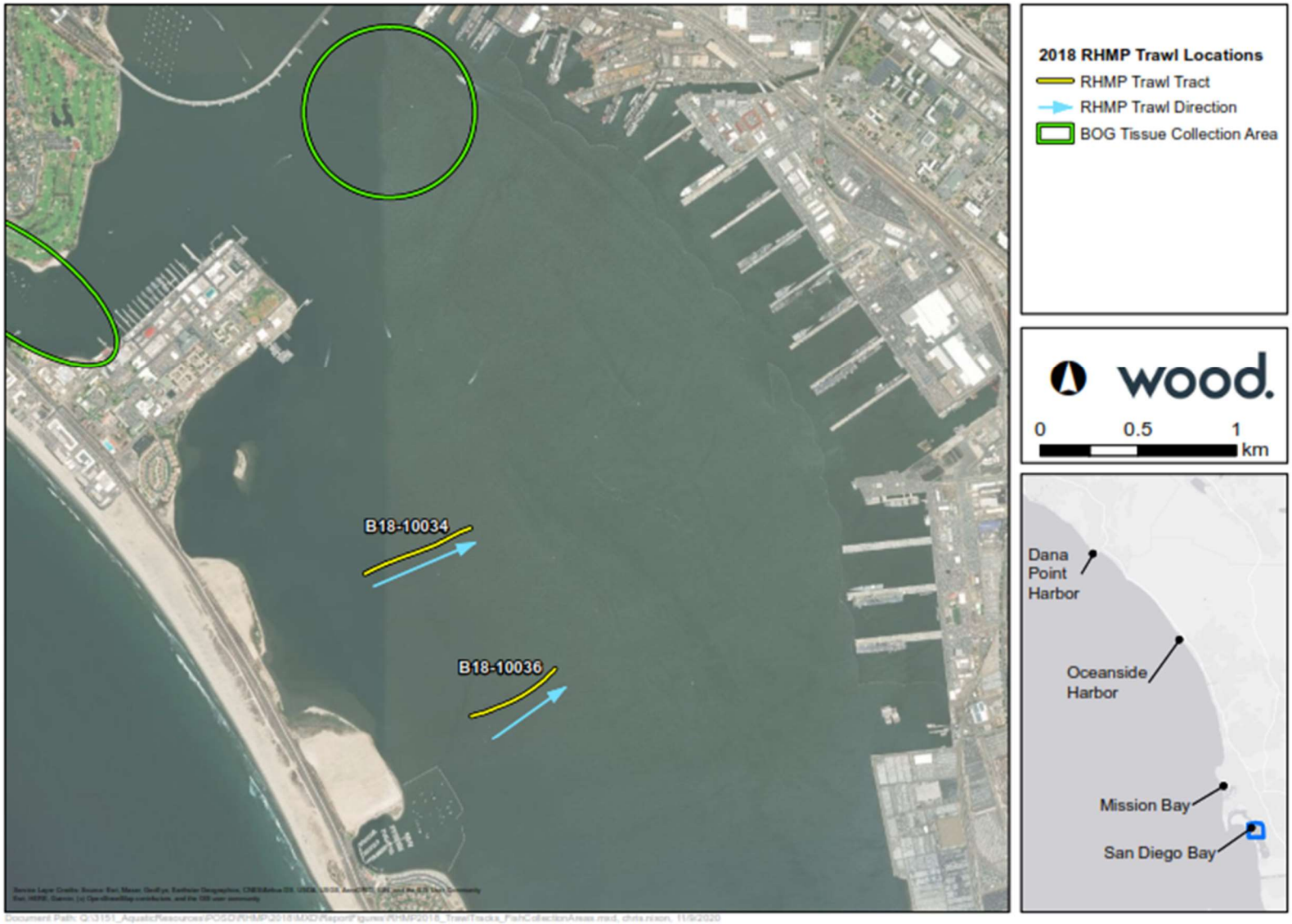


Figure 3-5. 2018 RHMP Trawl Locations and BOG Fish Collection Areas in South San Diego Bay A

Figure 3-6. 2018 RHMP Trawl Locations and BOG Fish Collection Areas in South San Diego Bay B

3.3 Sediment Chemistry

Sediment chemistry data from the 2013 and 2018 RHMP were averaged for the five survey areas with mean concentrations presented in Table 3-2. Figures 3-7 and 3-8 show the full range of values as individual points, the area average as bars, and one standard deviation from the mean as whiskers. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations. Note that one station from the 2018 RHMP within Oceanside Harbor (B18-10069) was excluded from PCB analysis after identification as a statistical outlier by Grubb's test due to an extremely high concentration of PCBs (5,348 ng/g dw) that was several orders of magnitude above concentrations measured at other stations within Oceanside Harbor. While this station is representative of the heterogeneity of sediment chemistry within embayments, the inclusion of B18-10069 would increase the area average by nearly 600x due to the small sample size (n=7 total sediment stations within Oceanside Harbor), which is not indicative of the general conditions encountered within much of the harbor. Stations that were included in the analysis of Oceanside Harbor represented outer, middle, and inner harbor areas, giving confidence that the exclusion of one station did not skew the results of BSAFs disproportionately by only representing one area or strata. Fishes have the potential to occupy areas with high sediment COPCs, although their residence time in these areas is uncertain. One composite of spotfin croaker (collected by CDFW for the BOG program) was collected from the same area of Oceanside Harbor as B18-10069, and all fish composites from Oceanside were analyzed with the potential for exposure to high sediment concentrations in mind.

Differences in sediment chemistry between harbors was analyzed using a Kruskal-Wallis ANOVA with Dunn's multiple comparisons test for pairwise analysis (Figures 3-7 and 3-8). Sediment concentrations were transformed using a log(y+1) transformation prior to statistical analyses to lessen variance and normalize the distribution of the data. For each parameter, results from the global, one-way ANOVA test are presented in graphs, and corresponding pairwise comparisons are provided in Appendix C. Significant differences between harbors were observed for total organic carbon (TOC), mercury, selenium, total DDTs, total PAHs, and total PCBs in the sediment. While there were statistical differences between harbors for DDTs, the high number of non-detections combined with several elevated concentrations within San Diego Bay regions resulted in subtle differences among regional averages. There were no statistically significant differences between harbors for arsenic, total chlordanes, or total PBDEs in the sediment. Dieldrin was not detected in any sediment samples during the 2018 RHMP.

This page intentionally left blank

Table 3-2. Average Sediment Concentrations of COPCs by Survey Area (2013 and 2018 RHMP Combined)

Harbor	TOC (% dw)	Total Chlordanes (ng/g dw)	Total DDTs (ng/g dw)	Dieldrin (ng/g dw)	Total PAHs (ng/g dw)	Total PBDEs (ng/g dw)	Total PCBs[a] (ng/g dw)	Arsenic (µg/g dw)	Mercury (ng/g dw)	Selenium (µg/g dw)
Dana Point Harbor	1.70	0.55	2.17	ND	349	10.8	3.10	9.39	51.4	0.709
Oceanside Harbor	1.88	0.08	2.03	ND	181	8.14	1.77[b]	9.57	161	0.485
Mission Bay	2.05	0.95	0.46	ND	286	2.79	1.33	8.79	74.2	0.488
North San Diego Bay	0.99	2.69	2.25	ND	1449	3.42	45.0	7.84	471	0.277
South San Diego Bay	1.16	1.70	5.28	ND	692	7.69	25.1	7.71	287	0.316

Notes:

a. Total PCB concentrations are a sum of the following 62 congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 174, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209.

b. Average total PCB concentration for Oceanside Harbor excludes station B18-10069. This station was determined to be a statistical outlier using Grubb's test due to an extremely high concentration of PCBs (5,348 ng/g dw). While this station is representative of the heterogeneity of sediment chemistry within embayments, the inclusion of B18-10069 would increase the area average by nearly 600x due to the small sample size (n=7 stations), which is not indicative of the general conditions encountered within much of the harbor.

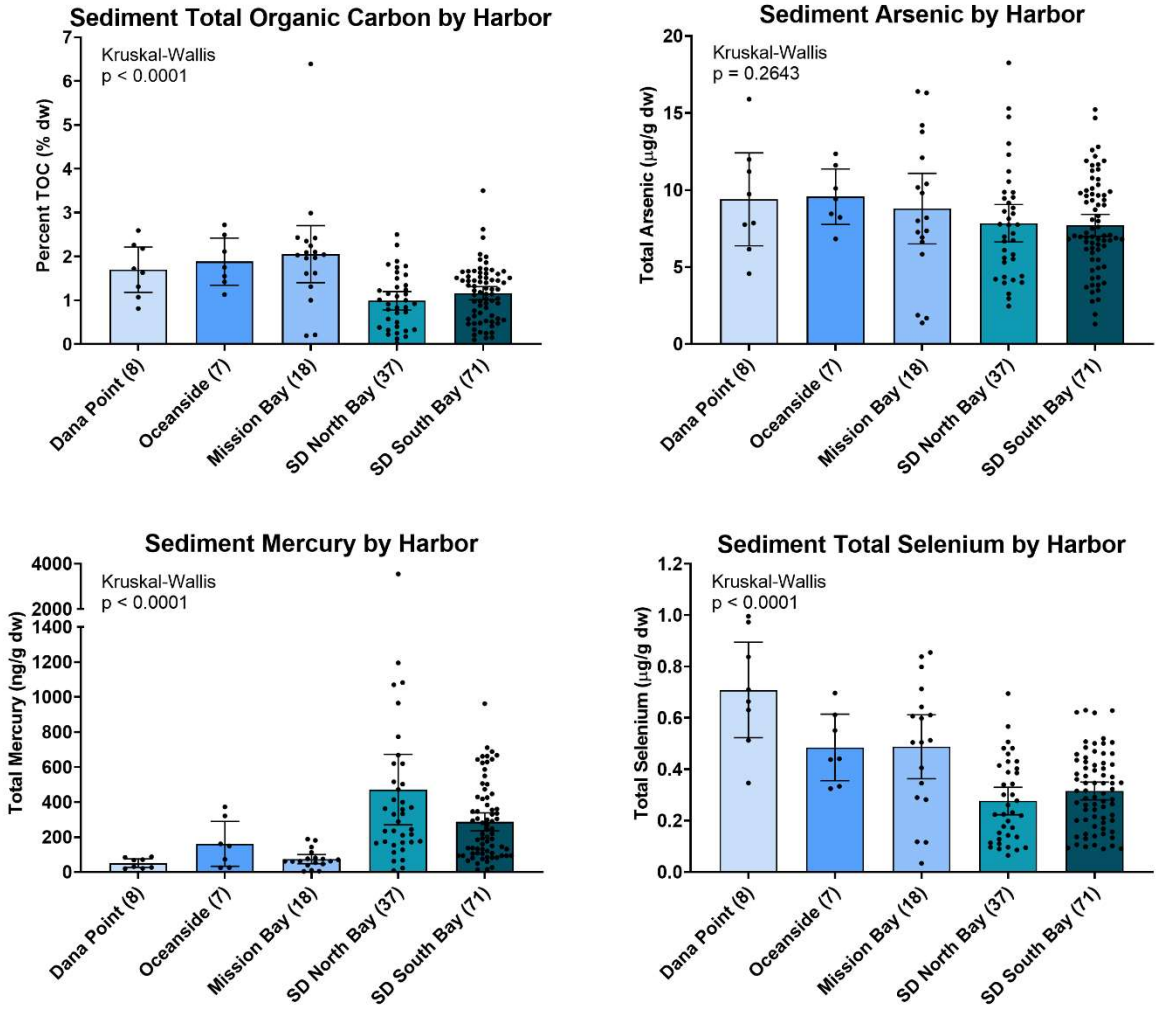


Figure 3-7. Total Organic Carbon, Arsenic, Mercury, and Selenium Concentrations in Sediment by Harbor

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. Sediment concentrations were transformed using a log(y+1) transformation prior to statistical analyses.

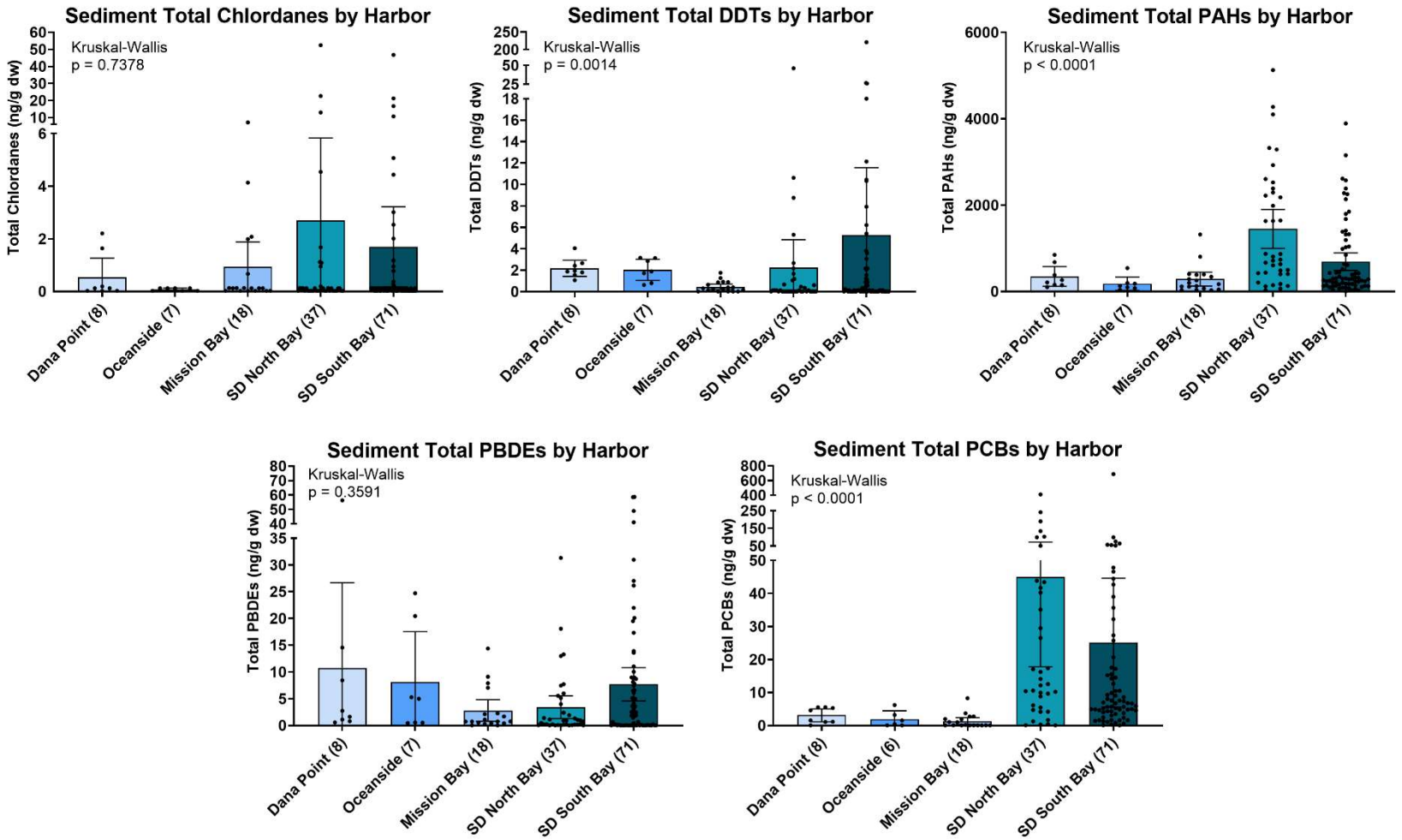


Figure 3-8. Total Chlordanes, Total DDTs, Total PAHs, Total PBDEs and Total PCBs Concentrations in Sediment by Harbor

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. Sediment concentrations were transformed using a log(y+1) transformation prior to statistical analyses.

Total PCB concentrations are a sum of the following 62 congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 174, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209.

This page intentionally left blank

3.4 Tissue Contaminants

Tissue chemistry results are presented and discussed using both raw and lipid-normalized data for organic contaminants. For organic, lipophilic compounds, lipid-normalized data are presented first to describe comparisons amongst regions, feeding guilds, and species. Concentrations of lipophilic contaminants such as DDTs, PAHs, PCBs in biota are frequently corrected for variation in tissue lipid content, and sediments corrected for variation in organic carbon content prior to evaluating bioaccumulation potential from sediments (Hebert and Keenleyside, 1995). These corrections reduce variation that may be associated with these factors because nonpolar organic compounds have a strong affinity for lipids and organic compounds. This normalization approach is desirable when contaminant concentration in tissues varies in direct proportion to lipid content. Results for percent lipid analysis of tissues and linear regressions comparing lipid content to concentrations of organic contaminants in fish tissue samples are provided in Appendix C to further support this approach.

Raw tissue chemistry results are similarly presented across harbors, feeding guilds, and species groups. Concentrations, reported in wet weight, are then compared to human health and wildlife screening criteria for risk assessment. Screening levels illustrated on figures represent the OEHHA ATLs for seven 8-oz servings per week (in green; the most conservative ATL) and “do not consume” thresholds (in red). Tissue concentrations are compared to the human health and ecological risk criteria described in Sections 2.4.4 and 2.4.5, respectively. Tissue chemistry results for metals were not normalized, with the exception of total mercury in spotted sand bass, where fish length was used to normalize data.

For both lipid-normalized and raw tissue chemistry results, statistical significance between groups was analyzed using a Kruskal-Wallis one-way ANOVA with Dunn’s multiple comparisons test for pairwise analysis. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. Results from the global, one-way ANOVA test are presented in graphs, while detailed pairwise comparisons are provided in Appendix C.

3.4.1 Total Chlordanes

Fish collected from Mission Bay, North San Diego Bay, and South San Diego Bay had the highest mean concentrations of total chlordanes. The highest concentrations of lipid-normalized total chlordanes were observed in a single composite samples from brown smooth-hound sharks (256 ng/g ww/% lipid) and a composite sample from Pacific chub mackerel (236 ng/g ww/% lipid) collected from Mission Bay and North San Diego Bay, respectively. Between harbors, mean concentrations of lipid-normalized total chlordanes in fish tissue ranged from 31.6 to 81.8 ng/g ww/% lipid (Figure 3-9a). Mean concentrations of lipid-normalized total chlordanes ranged from 44.3 to 144 ng/g ww/% lipid among feeding guild groups (Figure 3-9a). The highest mean concentration of chlordane was observed within the forage planktivore guild containing the two anchovy species, which was significantly greater than the two predatory feeding guilds. This is consistent with results from 2013 that identified forage planktivores (deepbody anchovy and slough anchovy) as the guild with the highest total chlordane tissue concentrations. The greatest variation was observed within the forage mesocarnivore guild, comprised only of Pacific chub mackerel, with concentrations ranging from 11.6 to 236 ng/g ww/% lipid. Mean concentrations of lipid-normalized total chlordanes were similar across species, with the exception of the northern

and slough anchovy, Pacific chub mackerel, salema, and brown smooth-hound shark, all of which had mean concentrations greater than 100 ng/g ww/% lipid (Figure 3-9a).

Raw mean tissue concentrations of chlordane were greatest among the forage planktivores comprised of both northern and slough anchovies. Shiner surfperch had the next highest concentration of total chlordanes among individual species (Figure 3-9b). Relationships to human health and ecological risk guidelines are described in the following chlordane Risk Assessment section.

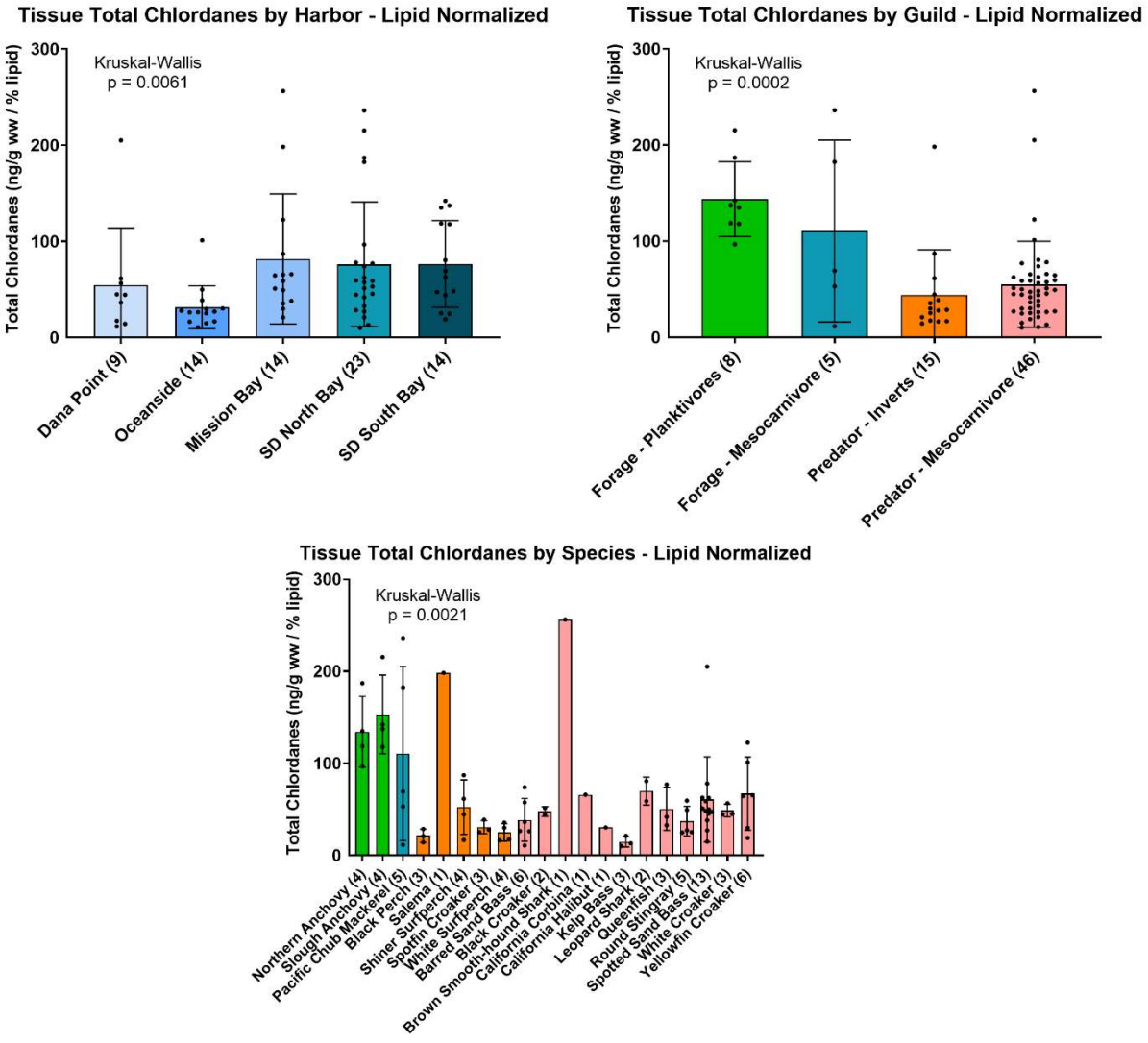


Figure 3-9a. Lipid-Normalized Tissue Concentration of Chlordanes Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. ATL values are not available for lipid normalized data.

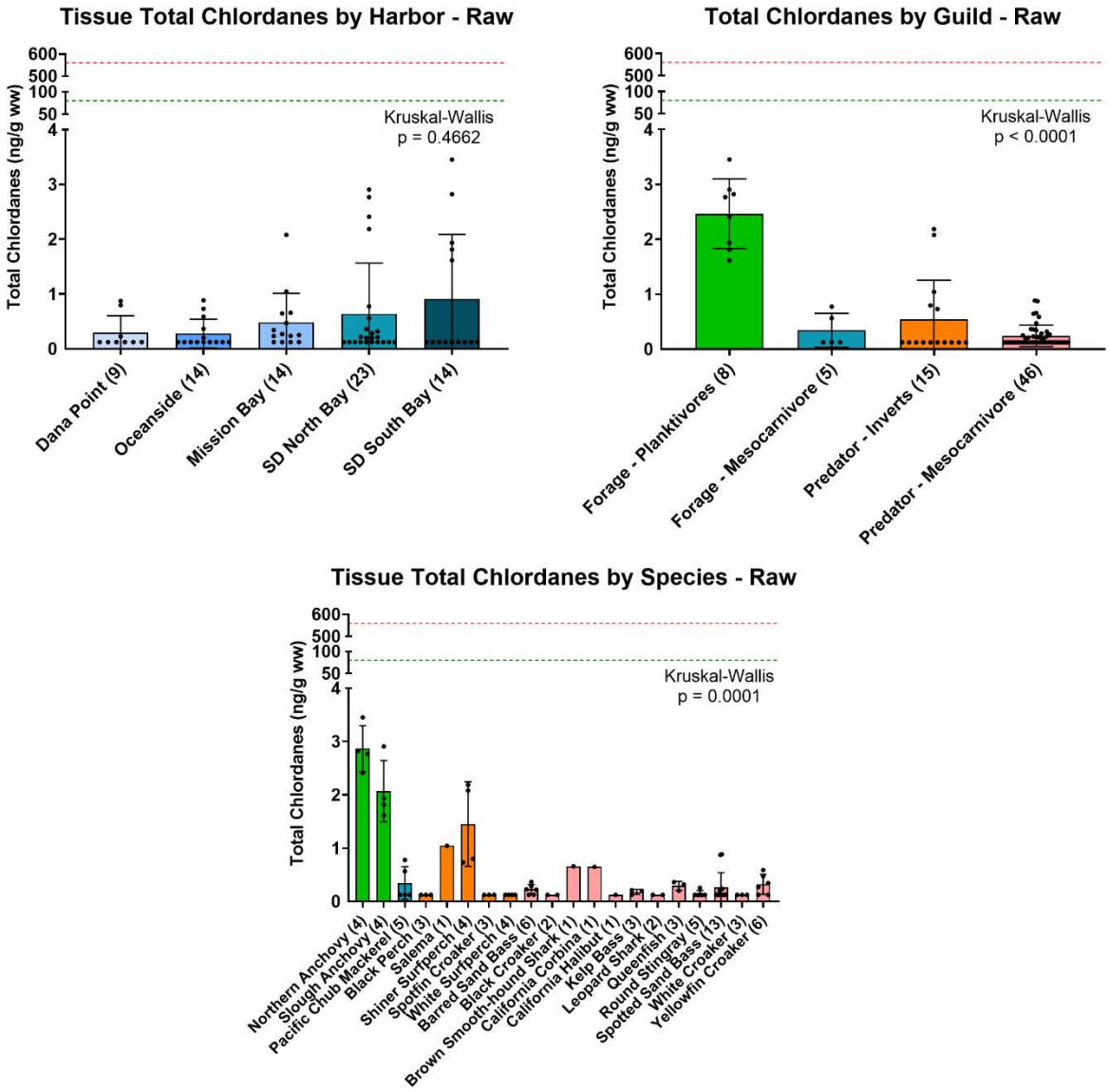


Figure 3-9b. Tissue Concentration of Chlordanes Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower and upper OEHHA ATLs of seven servings per week (80 ng/g ww, in green) and "do not consume" (560 ng/g ww, in red). The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test.

Screening Level Risk Assessment

The concentrations of total chlordanes in tissues were compared with several screening-level guidelines based on both human health and wildlife risk. Analyses were performed on skin-off fillet samples with the exception of northern anchovy and slough anchovy, in which the entire organism was analyzed, and shiner surfperch, in which the entire organism was analyzed after removal of the head, tail and internal organs. Comparisons are as follows:

- **OEHHA Fish Consumption ATLs**: Less than 80 ng/g ww (7 servings per week), 140 to 560 ng/g ww (no more than 3 servings per week), and > 560 ng/g (no consumption). See Table 2-3 for additional serving limits.
- **OEHHA FCG**: Target tissue level is 5.6 ng/g ww for individuals consuming approximately 8 oz per week, or approximately 32 g/day.
- **Oregon DEQ (2007)**: Lowest ATLs for applicable wildlife (1,200 ng/g ww for birds and 3,300 ng/g ww for mammals); ATL for humans (27 ng/g ww – general/recreational); and the critical tissue level (CTL) in fish, shellfish, or other saltwater aquatic organisms (56 ng/g ww).
- **USFWS**: Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota of San Diego Bay (Zeeman, 2016): 196 to 1,006 ng/g ww no observed effect concentration (NOEC) values to birds from consuming invertebrates or fish; and 8,578 to 44,025 ng/g ww lowest observed effect concentration (LOEC) values to birds from consuming invertebrates or fish.

Concentrations of total chlordanes in tissue samples from all fish species analyzed for the 2018 RHMP were well below all available criteria for protection of human health, similar to that observed during the 2013 RHMP. The highest concentration of total chlordanes in fish tissue observed among samples collected from all embayments was 3.5 ng/g ww, well below the most conservative OEHHA ATL of 80 ng/g ww (Figure 3-9b). No concentrations of total chlordanes in tissues exceeded the Oregon DEQ ATLs for applicable wildlife, Oregon DEQ CTL, nor NOEC and LOEC prey item threshold values for the protection of bird species summarized by USFWS (Zeeman, 2016).

3.4.2 Total DDTs

The highest concentrations of total DDTs were measured in single composite of yellowfin croaker collected in Oceanside Harbor and brown smooth-hound sharks collected in Mission Bay (approximately 3,330 ng/g ww/% lipid and 5,020 ng/g ww/% lipid, respectively). Mean concentrations of lipid-normalized total DDTs in fish tissue were similar among all embayments, ranging from approximately 625 to 1040 ng/g ww/% lipid (Figure 3-10a).

Among feeding guilds, mean concentrations of lipid-normalized total DDTs were greatest in the forage mesocarnivore group (Pacific chub mackerel), averaging approximately 1,710 ng/g ww/% lipid. This mean concentration is more than double that of the predator mesocarnivore guild (825 ng/g ww/% lipid), and nearly four times that of the forage planktivore and predator invertebrate guilds (469 and 468 ng/g ww/% lipid, respectively). The greatest variation in lipid-normalized DDT was observed within the predator mesocarnivore guild, where both the highest single composite

concentration (5,020 ng/g ww/% lipid in brown smooth-hound shark) and lowest (26.0 ng/g ww/% lipid in round stingray) in fish tissue were reported.

Across species, mean concentrations of lipid-normalized DDT in the brown smooth-hound shark (approximately 5,020 ng/g ww/% lipid) was over twice that of the leopard shark (approximately 1,930 ng/g ww/% lipid) and Pacific chub mackerel (approximately 1,710 ng/g ww/% lipid), although it should be noted that only a single composite sample of brown smooth-hound shark was analyzed for this study. Yellowfin croaker had the greatest variability between composites, with concentrations of lipid-normalized total DDTs ranging from approximately 498 to 3,330 ng/g ww/% lipid.

Raw mean tissue concentrations of total DDTs were similar among all feeding guilds with the greatest by a small margin among the forage planktivores comprised of both northern and slough anchovies (Figure 3-10b). Shiner surfperch had the highest mean concentration of total DDTs among individual species, followed by the brown smooth-hound shark and kelp bass. Relationships to human health and ecological risk guidelines are described in the following DDT Risk Assessment section.

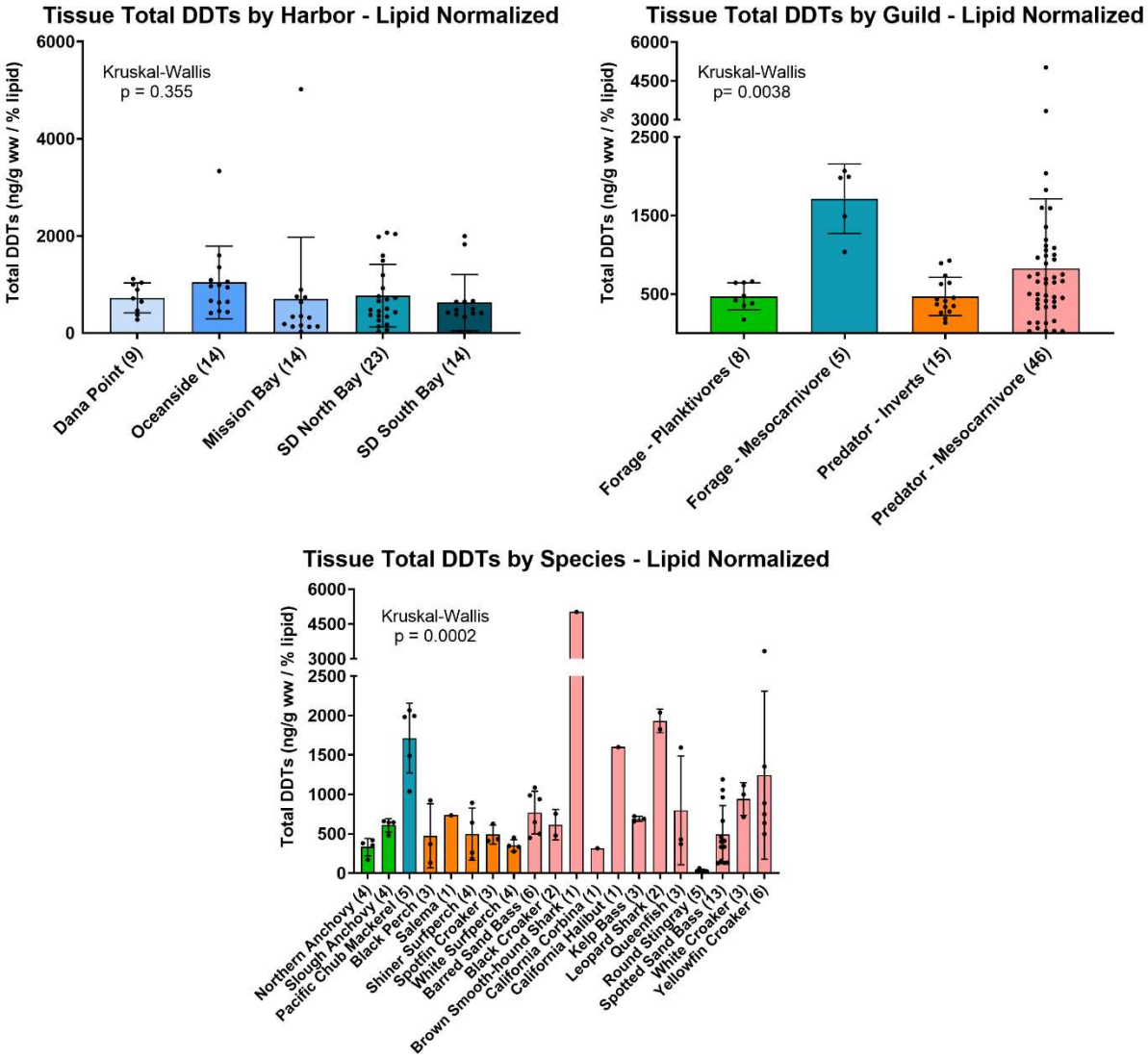


Figure 3-10a. Lipid-Normalized Tissue Concentration of Total DDTs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. ATL values are not available for lipid normalized data

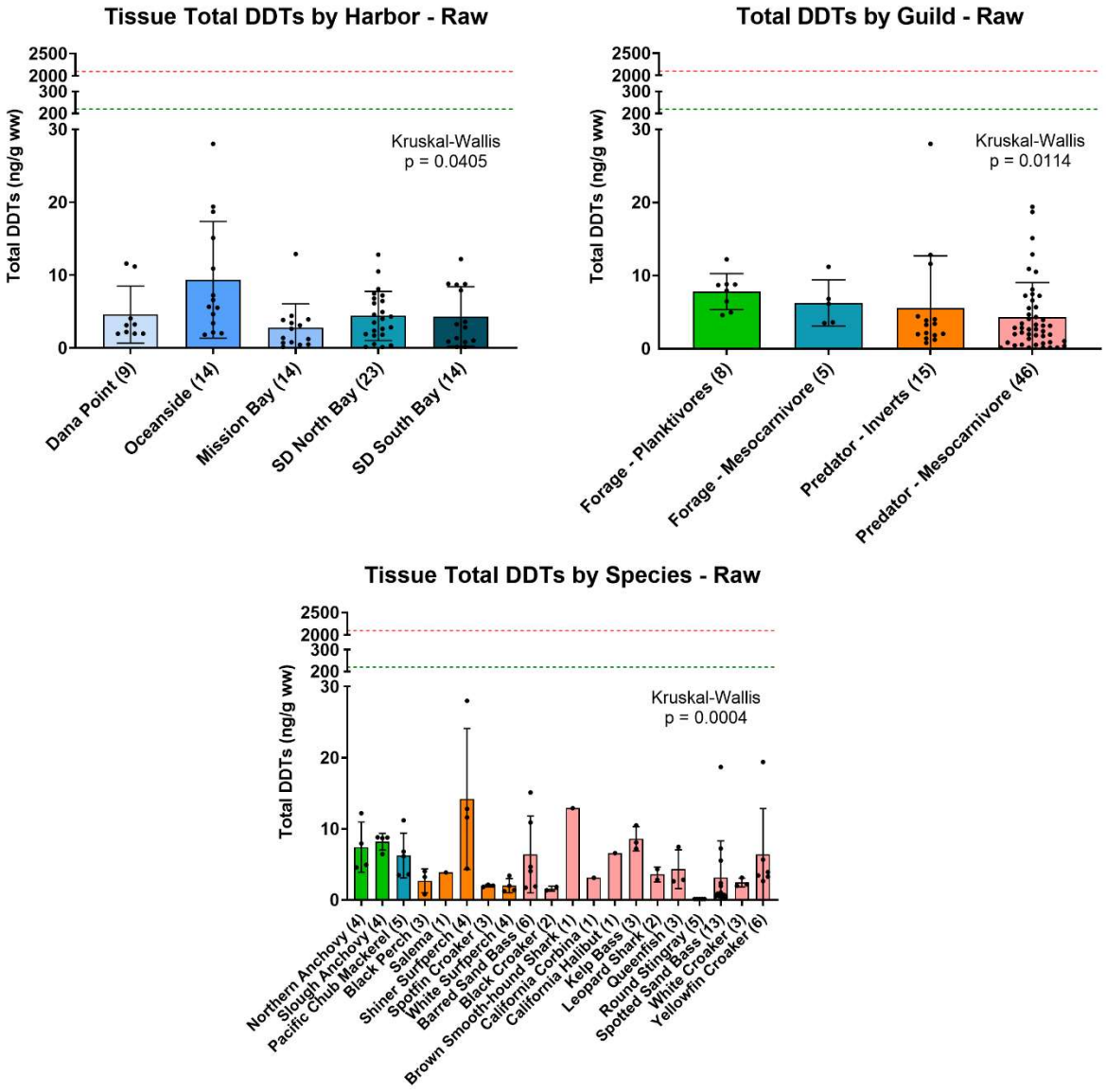


Figure 3-10b. Tissue Concentrations of Total DDTs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the upper and lower OEHHA ATLs of seven servings per week (220 ng/g ww, in green) and "do not consume" (2,100 ng/g ww, in red). The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test.

Screening Level Risk Assessment

The concentrations of total DDTs in tissues were compared with several screening-level guidelines based on both human health and wildlife risk. Analyses were performed on skin-off fillet samples with the exception of northern anchovy and slough anchovy, in which the entire organism was analyzed, and shiner surfperch, in which the entire organism was analyzed after removal of the head, tail and internal organs. Comparisons are as follows:

- **OEHHA Fish Consumption ATLs**: Tissue concentrations at or below 220 ng/g ww (7 servings per week, 390 to 2,100 ng/g ww (no more than 3 servings per week), and > 2100 ng/g ww (no consumption). See Table 2-3 for additional serving limits.
- **OEHHA FCG**: Target tissue level is 21 ng/g ww for individuals consuming approximately 8 oz per week, or approximately 32 g/day.
- **Oregon DEQ (2007)**: Lowest ATL for applicable wildlife (48 ng/g ww for osprey); ATL for humans (27 ng/g ww – general/recreational); and the CTL in fish, shellfish, or other saltwater aquatic organisms (54 ng/g ww). Reported as total 4'4'-DDT, 4'4'-DDE, or 4'4-DDD individually.
- **USFWS**: Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota in San Diego Bay (Zeeman, 2016): 11 to 57 ng/g ww NOEC values to birds from consuming invertebrates or fish; and 33 to 170 ng/g ww LOEC values to birds from consuming invertebrates or fish.

Fish tissue composite samples from 2018 in all embayments were well below the most conservative OEHHA ATL (up to seven servings per week) of 220 ng/g ww (Figure 3-10b), which is consistent with no exceedances in 2013. Additionally, all samples in 2018 were below the OEHHA FCG of 21 ng/g ww with the exception of one shiner surfperch composite sample collected from Oceanside Harbor, which had a concentration of 28 ng/g ww. Tissue concentrations of total DDT from the one surfperch composite were also above the Oregon DEQ ATL for humans (27 ng/g ww), and above certain USFWS NOEC values for avian piscivores, including the California Least Tern and Caspian Tern (Zeeman, 2016).

3.4.3 Total Dieldrin

Dieldrin was not detected in any tissue samples during the 2018 RHMP, which was also true of all benthic infauna and fishes analyzed during the 2013 RHMP and associated SWHB Study (Amec Foster Wheeler, 2016). Therefore, statistical analyses were not performed.

Screening Level Risk Assessment
Several screening-level guidelines based on both human health and wildlife risk for total dieldrin are as follows:

- **OEHHA Fish Consumption ATLs**: Tissue concentrations at or below 7 ng/g ww (7 servings per week), 11 to 46 ng/g ww (no more than 3 servings per week), and > 46 ng/g ww (no consumption). See Table 2-3 for additional serving limits.
- **OEHHA FCG:** Target tissue level is 0.46 ng/g ww for individuals consuming approximately 8 oz. per week, or approximately 32 g/day.
- **Oregon DEQ (2007):** Lowest ATL for applicable wildlife (44 ng/g ww for birds); ATL for humans (0.58 ng/g ww – general/recreational); and the CTL in fish, shellfish, or other saltwater aquatic organisms (56 ng/g ww).

As described above, concentrations of dieldrin in all tissue samples were below the method detection limit of 0.1 ng/g ww. This concentration is well below any available documented concentrations of concern for both ecological and human health risk for this chemical compound.

3.4.4 Total PAHs

PAHs were not detected in any tissue samples during the 2018 RHMP. Therefore, statistical analyses were not performed.

Screening Level Risk Assessment
There are few resources containing screening-levels for PAH bioaccumulation, since these compounds can be metabolized by many species and therefore do not readily bioaccumulate in tissues (Zeeman, 2016; Oregon DEQ, 2007). For San Diego Bay, the suggested screening level for PAHs in fish tissue is 1,000 ng/g dw (Zeeman, 2016).

Concentrations of PAHs in all tissue samples were below the method detection limit of 1.0 ng/g ww. This concentration is well below the suggested screening level for PAHs in fish tissue of 1,000 ng/g dw identified for San Diego Bay in Zeeman (2016).

3.4.5 Total PBDEs

Mean concentrations of lipid-normalized total PBDEs in fish tissue were greatest in North San Diego Bay (Figure 3-11a). The highest concentrations of lipid-normalized total PBDEs from single composite samples were reported in fish collected from Mission Bay and North San Diego Bay, at approximately 1,570 and 1,380 ng/g ww/% lipid, respectively. These concentrations were primarily driven by sharks, rays, and Pacific chub mackerel.

Among feeding guilds, the greatest mean concentrations of lipid-normalized PBDEs were observed in the forage mesocarnivore guild, which is represented only by Pacific chub mackerel. Mean concentrations from this guild had more than three times that of the next highest guild, the predator mesocarnivore, although it also had the greatest variability.

Raw mean tissue concentrations of total PBDEs were greatest among the foraging mesocarnivore feeding guild comprised solely of Pacific chub mackerel (Figure 3-11b). The brown smooth-hound shark and kelp bass had the highest mean concentrations of raw PBDEs. Relationships to human health and ecological risk guidelines are described in the following PBDE Screening Level Risk Assessment section.

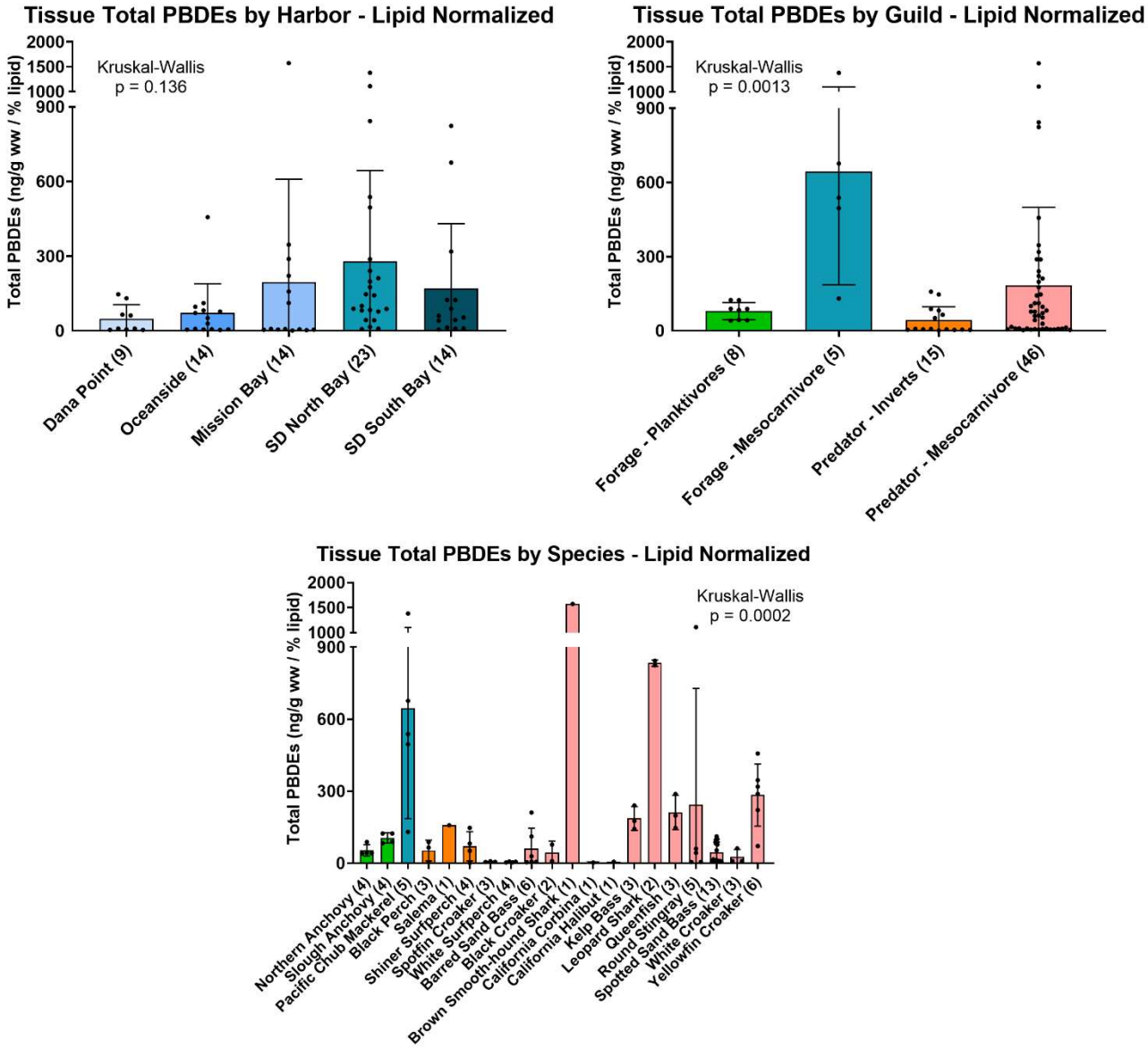


Figure 3-11a. Lipid-Normalized Tissue Concentrations of Total PBDEs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. ATL values are not available for lipid normalized data.

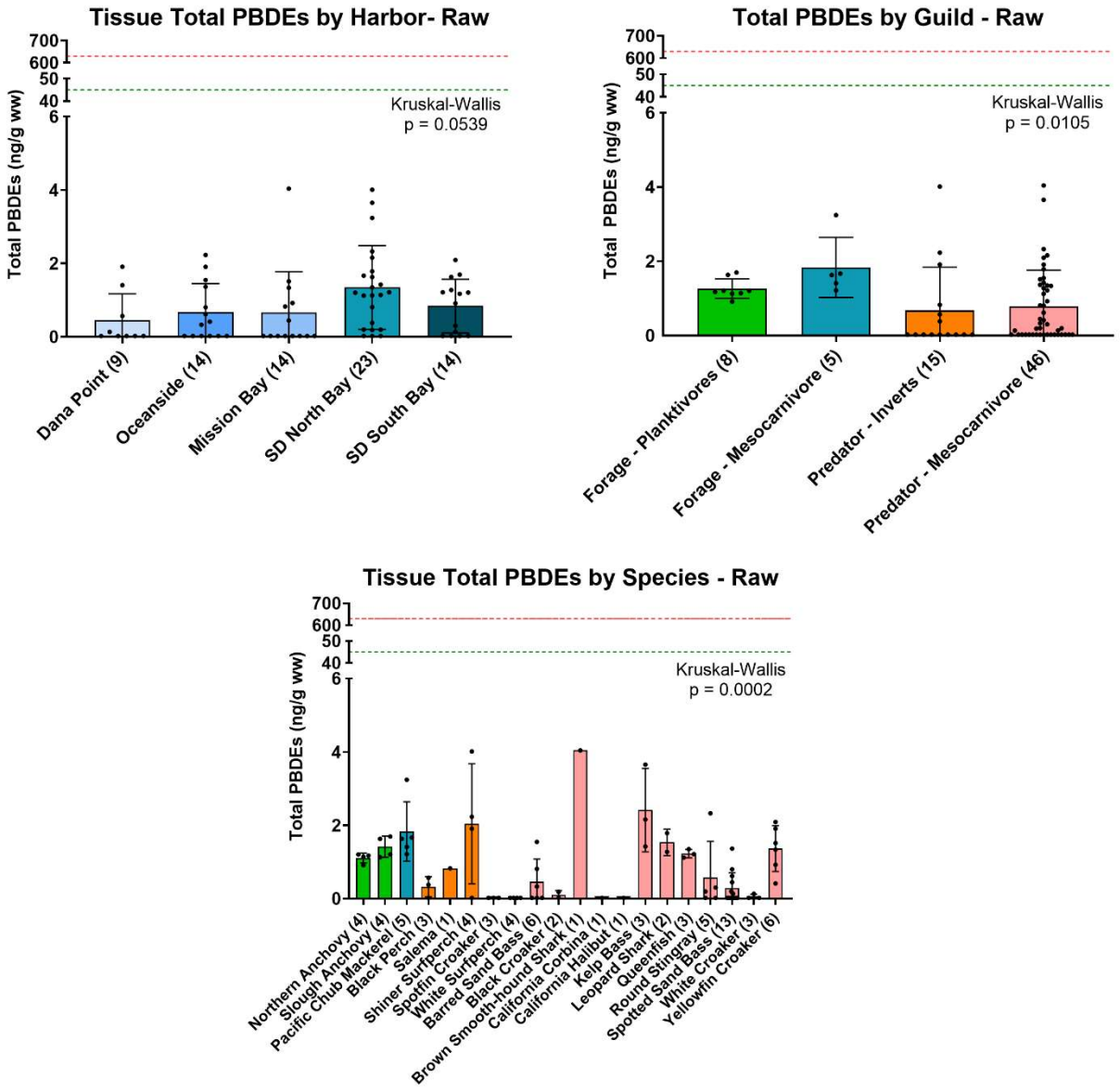


Figure 3-11b. Tissue Concentrations of Total PBDEs by Species Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower and upper OEHHA ATLs of seven servings per week (45 ng/g ww, in green) and "do not consume" (630 ng/g ww, in red). The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test.

Screening Level Risk Assessment

Screening-level guidelines based on both human health and wildlife risk for total PBDEs are as follows:

- **OEHHA Fish Consumption ATLs**: Tissue concentrations at or below 45 ng/g ww (7 servings per week), 78 to 630 ng/g ww (no more than 3 servings per week), and > 630 ng/g ww (no consumption). See Table 2-3 for additional serving limits.
- **USFWS**: Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota in San Diego Bay (Zeeman, 2016): 12 to 60 ng/g ww NOEC values to birds from consuming invertebrates or fish; and 118 to 604 ng/g ww LOEC values to birds from consuming invertebrates or fish.

The highest concentration of total PBDEs measured in tissue samples in 2018 was 4 ng/g ww. Concentrations in all tissue samples across regions were well below the most conservative OEHHA ATL (up to 7 servings per week) of 45 ng/g ww (Figure 3-11b). Only one fish analyzed in 2013 exceeded this threshold, a spotted sand bass from Central San Diego Bay with a concentration of 59 ng/g ww total PBDEs. Additionally, total PBDE concentrations were below the USFWS lowest NOEC value of 12 ng/g ww for avian piscivores.

3.4.6 Total PCBs

Concentrations of lipid-normalized PCBs in fish tissue were greatest in North and South San Diego Bay, with mean concentrations of approximately 9,120 and 11,300 ng/g ww/% lipid, respectively (Figure 3-12a). Concentrations in these regions were significantly greater than those observed in Dana Point, Oceanside Harbor, or Mission Bay, in which mean concentrations ranged from approximately 929 to 2,790 ng/g ww/% lipid. The one sediment station in Oceanside Harbor (B18-10069) with high concentrations of PCBs (5,348 ng/g dw) does not appear to have increased overall fish tissue concentrations of PCBs in this area, even with one composite of spotfin croaker collected in the immediate vicinity. Three composite samples of Pacific chub mackerel, collected from North and South San Diego Bay, had the highest single concentrations of lipid-normalized PCBs.

Among feeding guilds, the greatest mean concentrations of lipid-normalized PCBs were observed in the forage mesocarnivore guild (consisting solely of Pacific chub mackerel), at 21,000 ng/g ww/% lipid. High variation was observed among samples in this guild, with concentrations ranging from 265 ng/g ww/% lipid to approximately 37,000 ng/g ww/% lipid for single composite samples. Statistically, the forage planktivore, forage mesocarnivore, and predator mesocarnivore guilds had significantly greater concentrations of lipid-normalized PCBs than the predator invertebrate guild. The highest concentrations of lipid-normalized total PCBs in the predator mesocarnivore guild were measured in single composite samples from yellowfin croaker, spotted sand bass, round stingray, black croaker, and leopard shark species, ranging from approximately 10,100 to 18,500 ng/g ww/% lipid.

Mean raw tissue concentrations of total PCBs were greatest among the foraging planktivores feeding guild comprised of northern and slough anchovies (Figure 3-12b). The Pacific chub mackerel had the next highest mean concentration of raw PCBs, followed by a number of other species with similar tissue concentrations. Although anchovies had the highest raw total PCB concentrations, when accounting for lipid content, their concentrations dropped below that of the Pacific chub mackerel

and several other individual species composite samples due to the higher lipid content measured in anchovies. Relationships to human health and ecological risk guidelines are described in the following PCB Screening Level Risk Assessment section.

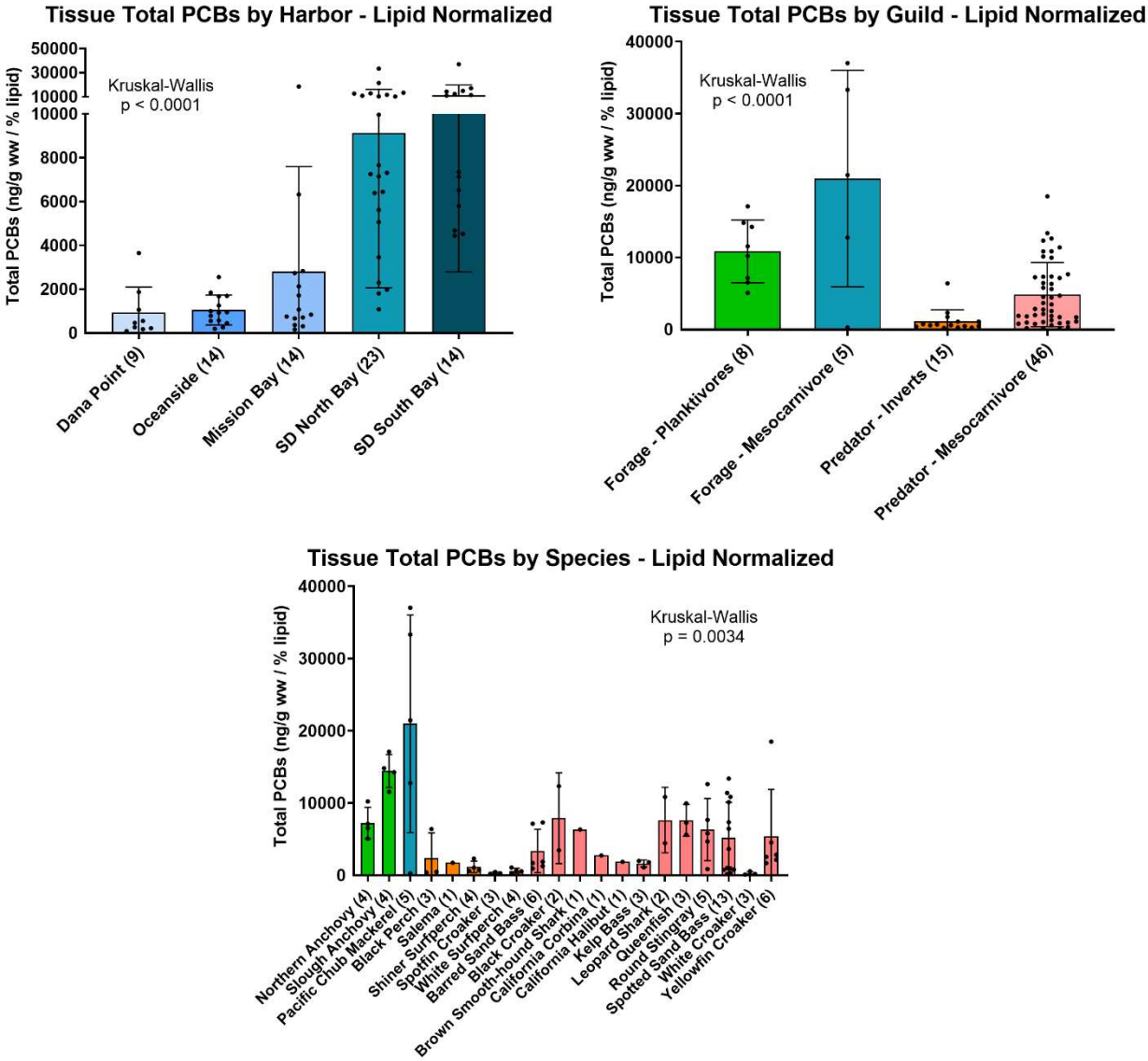


Figure 3-12a. Lipid-Normalized Tissue Concentration of Total PCBs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. ATL values are not available for lipid normalized data.

Total PCB concentrations include the following 62 congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 174, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209.

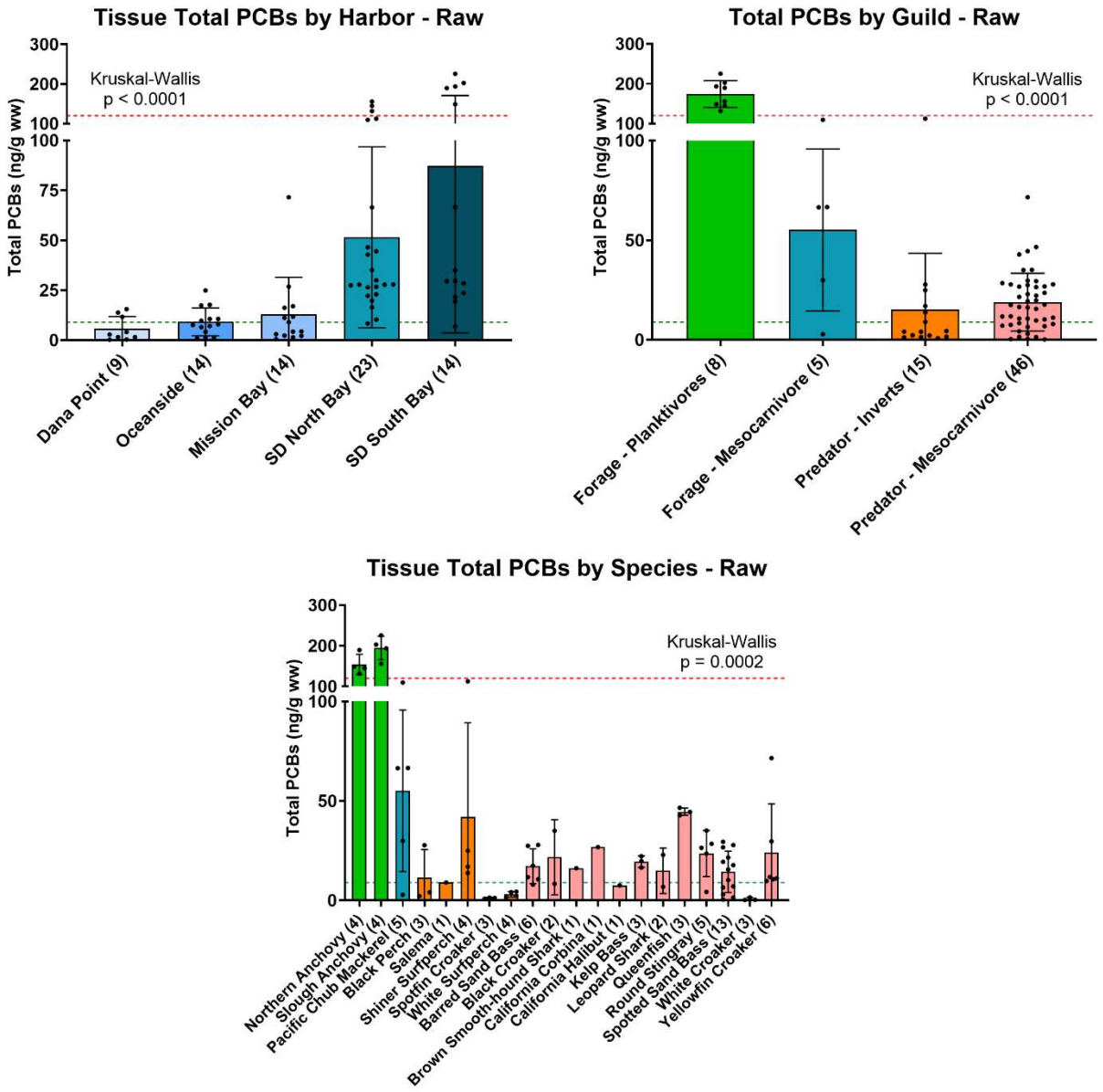


Figure 3-12b. Tissue Concentration of Total PCBs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the upper and lower OEHHA ATLs of seven servings per week (9 ng/g ww, in green) and "do not consume" (120 ng/g ww, in red). The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test.

Screening Level Risk Assessment

The concentrations of total PCBs in tissues were compared with several screening-level guidelines based on both human health and wildlife risk. Note that for all of these guideline values there is no specific guidance on which congeners or Aroclor mixtures shall be summed to derive the total PCB concentrations. The assumption is that the practitioner will use the most complete set of PCB data available, however it is recommended that future studies consider measuring all 209 PCB congeners to have a most accurate and comparable assessment of PCBs in the future.

Analyses were performed on skin-off fillet samples except for northern anchovy and slough anchovy, in which the entire organism was analyzed, and shiner surfperch, in which the entire organism was analyzed after removal of the head, tail and internal organs. Comparisons are as follows:

- **California OEHHA Fish Consumption ATLs:** Tissue concentrations of 9 ng/g ww (7 servings per week), 16 to 120 ng/g ww (no more than 3 servings per week) and > 120 ng/g (no consumption). See Table 2-3 for additional serving limits.
- **OEHHA FCG**: Target tissue level is 3.6 ng/g ww for individuals consuming approximately 8 oz. per week, or approximately 32 g/day.
- **Oregon DEQ (2007):** Lowest ATL for applicable wildlife (880 ng/g ww for mammals); ATL for humans (4.7 ng/g ww – general/recreational); and the CTL in fish, shellfish, or other saltwater aquatic organisms (930 ng/g ww). Reported as total Aroclors.
- **USFWS:** Tissue concentration screening values for San Diego Bay (Zeeman, 2004) – 80 to 150 ng/g dw[5] for a NOEC to fish.
- **USFWS:** Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota in San Diego Bay (Zeeman, 2016) – 110 to 566 ng/g ww NOEC values to birds[6] from consuming invertebrates or fish; and 1,556 to 7,987 ng/g ww LOEC values to birds from consuming invertebrates or fish.
- **SFBRWQCB TMDL for PCBs in San Francisco Bay:** 10 ng/g ww fish tissue to protect both wildlife and human health (as congeners or Aroclor mixtures).

The primary driver of risk from PCB exposure is related to human health, with generally much lower screening values for fish consumption than that for wildlife risk. Most of the fish tissue collected from the San Diego Regional Harbors had total PCB concentrations between the 7 servings per week and no consumption OEHHA ATLs of 9 and 120 ng/g ww, respectively (Figure 3-12b). Fish tissue collected from Dana Point Harbor, Mission Bay, and Oceanside Harbor had concentrations of total PCBs that were acceptable for 1-7 servings per week according to OEHHA guidance (i.e., below 120 ng/g ww “do not consume” OEHHA ATL). Anchovies, which were collected only from North and South San Diego Bay, were the only species with total PCB concentrations greater than the “do not consume” OEHHA ATL. However, single composite samples of Pacific chub mackerel and shiner

[5] Note that dry weight values are presented by Zeeman (2004) rather than wet weight concentrations, which are reported herein and among other referenced studies.

[6] Includes the surf scoter, California least tern, Caspian tern, Double-crested cormorant, and the Western gull. Prey item tissue screening-level NOEC and LOEC values for the protection of these bird species is provided in Appendix G, along with the associated references cited for the values reported.

surfperch in 2018 had total tissue PCB concentrations near this threshold, at 110 and 113 ng/g ww, respectively. This represents an improvement from 2013 when several species, including barred sand bass, spotted sand bass, California halibut, deepbody anchovy, and slough anchovy, had mean tissue concentrations that exceeded the "do not consume" ATL, although this could be in part due to the analysis of whole fish in 2013 and skin-off filets in 2018 (see discussion in Section 3.7). Nearly 83% of samples in 2018 had concentrations of total PCBs greater than the OEHHA FCG of 3.6 ng/g ww and approximately 78% of samples had concentrations greater than the Oregon DEQ ATL for human consumption of 4.7 ng/g ww.

Concentrations of total PCBs in fish tissue samples were generally below screening levels for wildlife as presented above. However, a single composite sample of shiner surfperch, and all anchovy samples, had tissue concentrations of total PCBs that exceeded the lowest USFWS NOEC values for birds consuming invertebrates or fish of 110 ng/g ww (Zeeman, 2016). Tissue concentrations from all samples were below the lowest Oregon DEQ ATL for applicable wildlife, and the Oregon DEQ CTL. A majority of samples collected were above the SFBRWQCB TMDL for PCBs in San Francisco Bay for both human and wildlife protection.

3.4.7 Arsenic

Mean concentrations of total arsenic in fish tissue ranged from 0.98 µg/g ww in Dana Point Harbor to 3.1 µg/g ww in South San Diego Bay (Figure 3-13). Although the highest concentrations were observed in Mission Bay and South San Diego Bay, there were no significant differences between harbors.

Mean concentrations of arsenic in fish tissue were similar among all feeding guilds with the highest mean concentration in the predator mesocarnivore guild (2.5 µg/g ww). However, tissue concentrations of total arsenic in this guild were not significantly different from the other feeding guild groups, in which mean concentrations of total arsenic ranged from 1.0 to 1.7 µg/g ww. The highest mean tissue concentrations of arsenic within the predator mesocarnivore guild were driven by elasmobranchs (leopard shark, brown smooth-hound shark, and round stingray species) and a single California corbina composite sample. Mean concentrations measured in tissues from these species ranged from 3.9 to 14 µg/g ww. All other species had mean tissue concentrations of total arsenic below 2.0 µg/g ww with the exception of northern anchovies (2.4 µg/g ww).

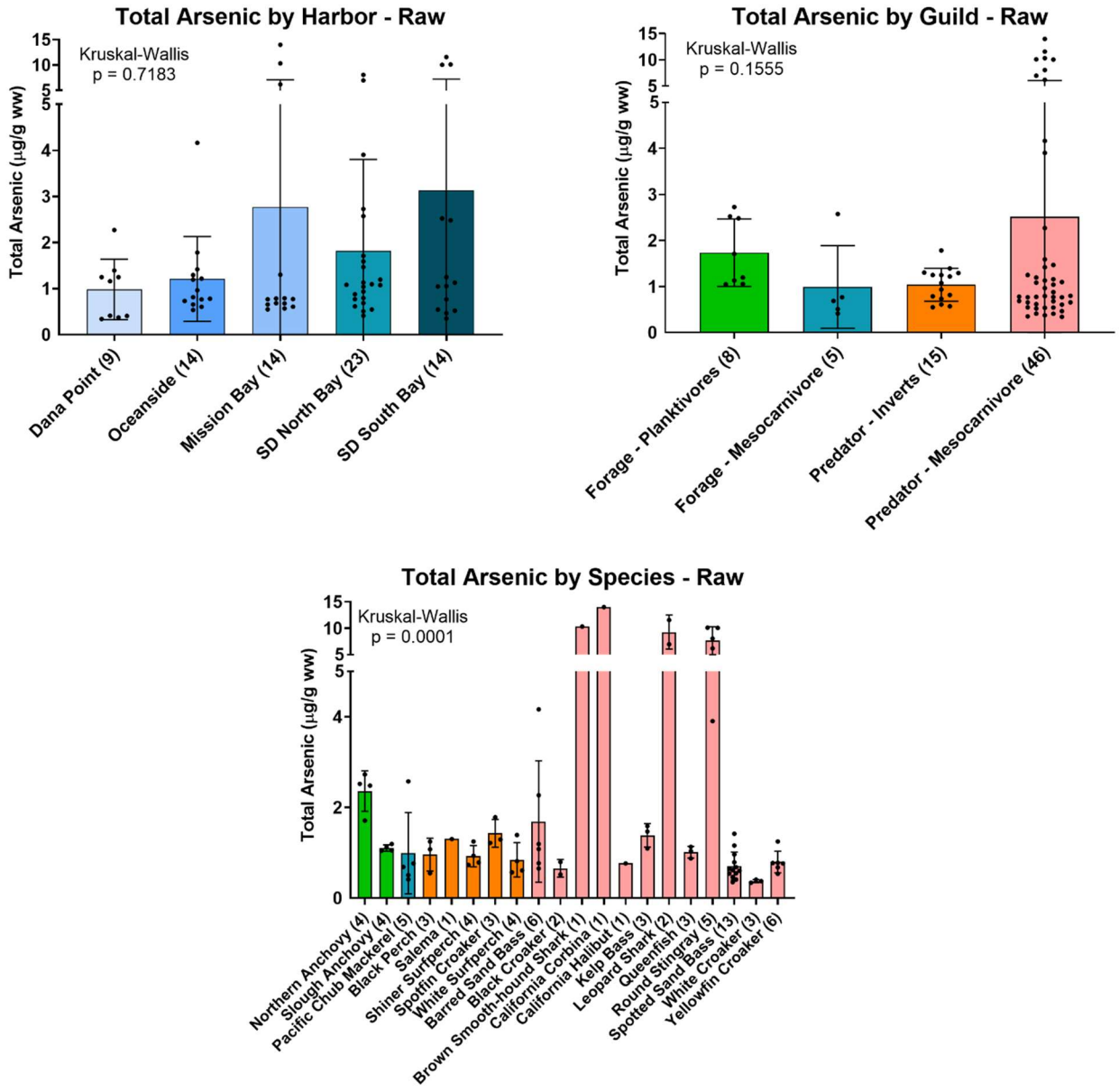


Figure 3-13. Tissue Concentrations of Arsenic Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. ATL values are not available for lipid normalized data.

Screening Level Risk Assessment

While toxicological effects have been primarily studied among inorganic arsenic, as it is a classified known carcinogen (USEPA Group A), approximately 90-99% of arsenic in seafood is present in its organic form (European Food Safety Authority [EFSA], 2009), for which no human consumption thresholds have been established. Screening levels for inorganic arsenic are presented below. However, because only total arsenic was measured, a comparison to risk thresholds for inorganic arsenic is not possible at this time. Analysis of the inorganic fraction may be considered for future efforts.

- **Agency for Toxic Substances and Disease Registry (ATSDR) acute duration oral Minimum Risk Level (MRL):** The ATSDR MRL for inorganic arsenic is 0.005 mg As/kg/day (ppm); chronic-duration oral MRL of 0.0003 mg/kg/day (ppm).

3.4.8 Mercury

Mean concentrations of total mercury in fish tissue ranged from 68 ng/g ww in Dana Point Harbor to 230 ng/g ww in South San Diego Bay (Figure 3-14). Although the highest concentrations were observed in North and South San Diego Bay, there were no significant differences between harbors.

The predator mesocarnivore feeding guild showed the highest concentration of total mercury in fish tissue. The average concentration of total mercury in fish tissue in this guild was 213 ng/g ww and was significantly greater than that in the forage planktivore and predator invertebrate feeding guilds, which had average tissue concentrations of 38.3 and 43.2 ng/g ww total mercury, respectively. The forage mesocarnivore feeding guild was not statistically unique from the other feeding guilds, with a mean tissue concentration of 98.9 ng/g ww. Mean concentrations of total mercury in fish tissue were highest in leopard shark, brown smooth-hound shark, black croaker, salema, and round stingray species (Figure 3-14).

Length-Normalization

Several studies (Hammerschmidt et al., 2006; Cai et al., 2007) have indicated that fish size, used to represent age, can have direct correlations to tissue concentrations of total mercury as it bioaccumulates over time[7]. Risk assessment programs for mercury in other regions, including San Francisco Bay, also account for fish length to evaluate human health risk related to tissue mercury concentrations (SFBRWQCB 2006). In this analysis, linear regressions were performed for each species comparing average total fish length to concentrations of mercury in composite samples (Appendix C). Significant correlations ($p<0.05$) were observed in two species, spotted sand bass (Figure 3-15) and spotfin croaker. Only spotted sand bass (n=13) were selected to perform a length-normalized analysis due to the limited number of spotfin croaker samples (n=3). For this assessment, total mercury tissue concentrations were divided by total length [(Hg concentration)/(length in millimeters/100)] and grouped by harbor to assess spatial trends (Figure 3-16).

[7] While the relationship between size and fish tissue concentrations has been established as a potentially useful tool for interpreting bioaccumulation patterns for mercury (McLaughlin et al., 2020), it has not been verified for other COPCs.

Overall, no significant differences in spatial patterns among harbors were observed between raw and length-normalized total mercury concentrations for spotted sand bass samples collected during the 2018 RHMP. Similar conclusions for spotted sand bass were made when conducting the same analyses with historical data sets (Amec Foster Wheeler, 2017a); therefore, this assessment currently provides little additional insight into the spatial differences among harbors. While there appears to be value in considering the age of fish when considering bioaccumulation potential of mercury in certain species, this analysis suggests that variability in sediment concentrations or the movement of fishes within their home range or seasonal migrations is likely a larger factor than fish size on the observed patterns in the San Diego Regional Harbors. Future studies could consider size of fish more directly by analyzing individual fish rather than calculating the average size in a composite, as this may make patterns more difficult to observe and compare. Additionally, while only two species (spotted sand bass and spotfin croaker) showed a significant correlation with size in the 2018 RHMP dataset, this may in part be due to small sample sizes for other species that reduced the power of the linear regressions. Future investigations into size of fish as a factor in mercury bioaccumulation should attempt to analyze more samples over a larger size range for a more robust assessment.

Relationships to human health and ecological risk guidelines are described in the following mercury Screening Level Risk Assessment section.

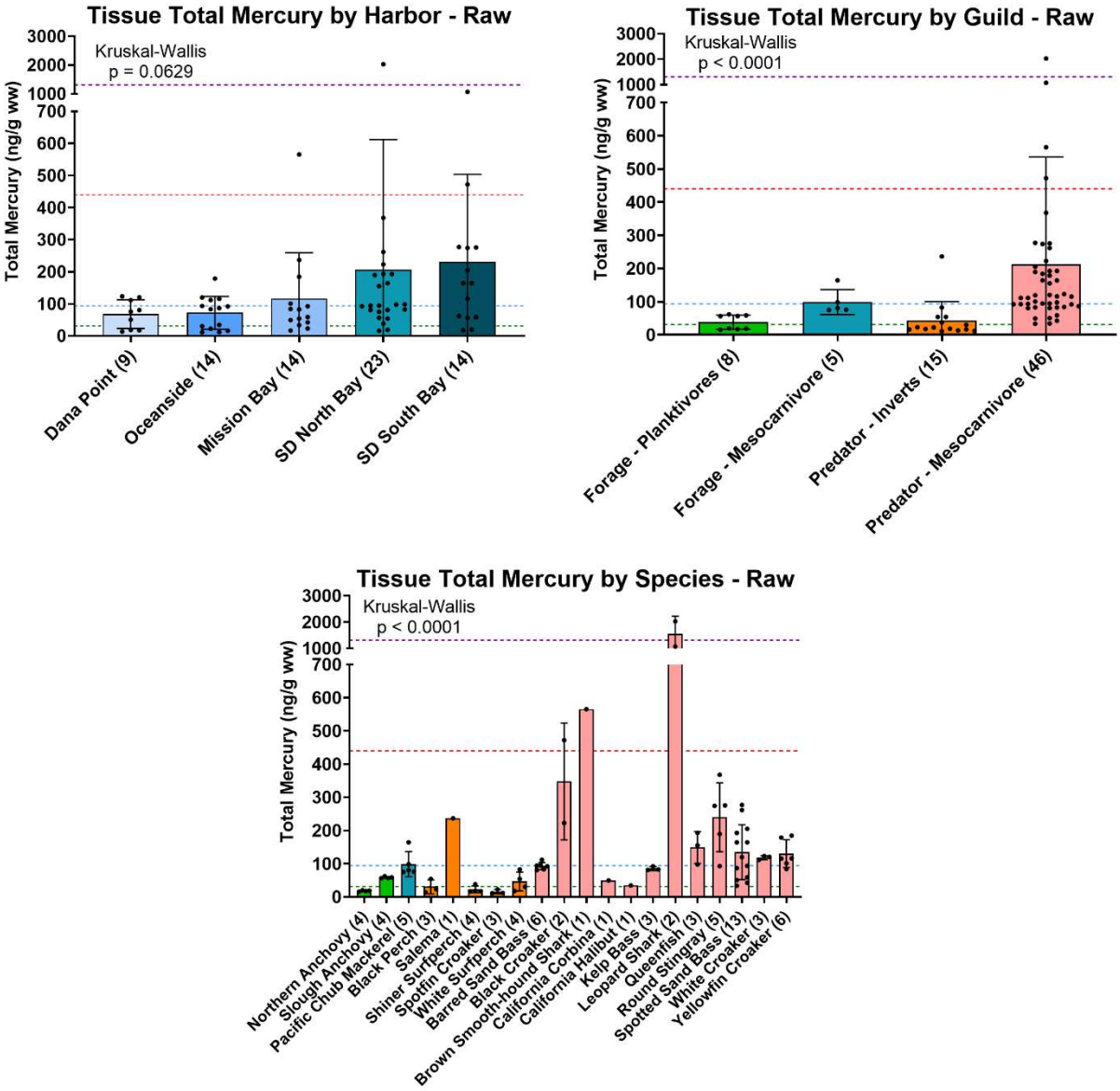


Figure 3-14. Tissue Concentrations of Mercury by Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the upper and lower OEHHA ATLs for Women 18-45 and children 1-17 of seven servings per week (31 ng/g ww, in green) and "do not consume" (440 ng/g ww, in red), and for women over age 45 and men of seven servings per week (94 ng/g ww, in blue) and "do not consume" (1,310 ng/g ww, in purple).

Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA on ranks. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

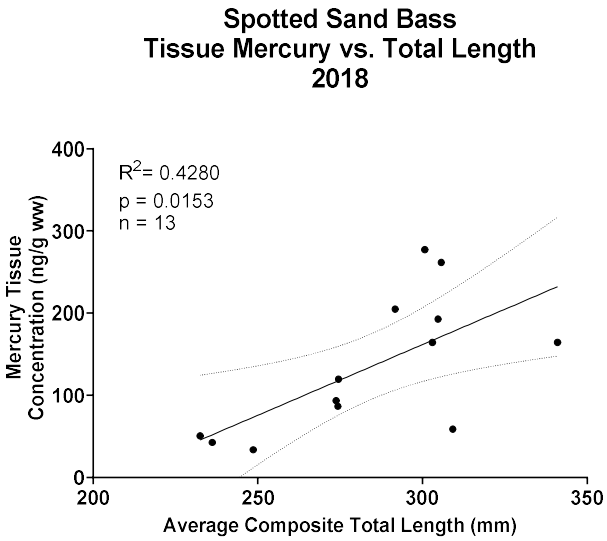


Figure 3-15. Linear Regression Analysis of Total Mercury Tissue Concentrations and Average Composite Total Length in Spotted Sand Bass

Note: Dotted lines represent 95% confidence bands of the best-fit line (solid line).

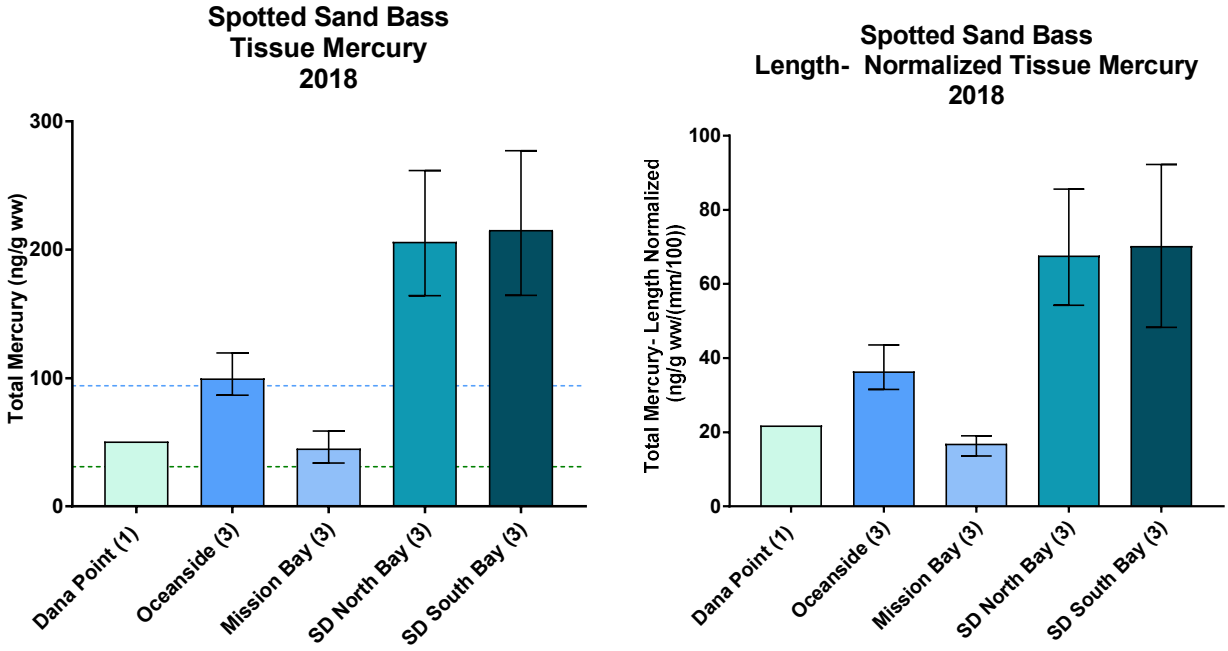


Figure 3-16. Raw and Length-Normalized Tissue Concentrations of Mercury in Spotted Sand Bass Across Harbors

Note: Bars represent averages, and whiskers represent the range of values. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.
The dotted lines represent the lower OEHHA ATLs (seven servings per week) for women 18-45 and children 1-17 (31 ng/g ww, in green) and for women over age 45 and men (94 ng/g ww, in blue).

Screening Level Risk Assessment

The concentrations of total mercury in tissues were compared with several screening-level guidelines based on both human health and wildlife risk. Analyses were performed on fillet samples with the exception of northern anchovy and slough anchovy, in which the entire organism was analyzed, and shiner surfperch. Comparisons are as follows:

- **OEHHA Fish Consumption ATLs:** Tissue concentrations for 7 servings per week: 31 ng/g ww (women aged 18-45 years and children 1–17 years), and 94 ng/g ww (women > 45 years of age and men). No more than 3 servings per week: 55 to 440 ng/g ww (women aged 18–45 years and children 1–17 years), and 160 to 1,310 ng/g ww (women > 45 years of age and men). No consumption: > 440 ng/g ww (women aged 18-45 years and children 1–17 years), and > 1,310 ng/g (women > 45 years of age and men).
- **OEHHA FCG**: Target tissue level is 220 ng/g ww for individuals consuming approximately 8 oz. per week, or approximately 32 g/day.
- **Oregon DEQ (2007):** Lowest ATL for applicable wildlife (74 ng/g ww for birds); ATL for humans (400 ng/g ww – general/recreational); and the CTL in fish, shellfish, or other saltwater aquatic organisms (180 ng/g ww). Reported as either total inorganic mercury or methyl mercury.
- **USFWS**: Screening values for San Diego Bay (Zeeman, 2004): < 120 ng/g dw NOEC value for fish.
- **USFWS:** Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota in San Diego Bay (Zeeman, 2016): 4.9 to 25.2 ng/g ww. NOEC values to birds from consuming invertebrates or fish; and 12.3 to 62.9 ng/g (most sensitive) or 221 to 1,132 ng/g (mid-range) ww LOEC values to birds from consuming invertebrates or fish.

While mean concentrations of total mercury in fish tissue exceeded the most conservative OEHHA ATL of 31 ng/g ww (women 18-45, children 1-17) in all harbors, mean concentrations from samples collected in Mission Bay, North San Diego Bay, and South San Diego Bay also exceeded the threshold of 94 ng/g ww (women >45, men) (Figure 3-14). From these three harbors, four composite samples were greater than the no consumption threshold of 440 ng/g ww (women 18-45, children 1-17), with one sample collected from North San Diego Bay also above the highest ATL threshold of 1,310 ng/g ww (women >45, men). In 2013, no fish that were analyzed exceeded the no consumption threshold of 440 ng/g ww for women 18-45 and children. All samples in 2018 with total mercury concentrations above the no consumption OEHHA ATLs (for both women 18-45, children 1-17 and women >45, men) were from sharks, with the exception of one black croaker composite sample. Pacific chub mackerel, salema, spotted sand bass, queenfish, white croaker, yellowfin croaker, and barred sand bass had average total mercury concentrations between the 7 servings per week (31-94 ng/g ww) and no consumption (440-1,310 ng/g ww) ATL thresholds, indicating that at least one serving per week of these species are safe to consume for the general population. Concentrations of mercury in fish tissue from all other species collected were at or below the 7 servings per week threshold for either women 18-45, children 1-17; women >45 and men; or both, indicating more than 7 servings per week is safe for consumption.

Approximately 63% and 21% of samples collected had tissue concentrations of total mercury above the lowest Oregon DEQ for applicable wildlife (74 ng/g ww) and/or for CTL in fish, shellfish, or other

saltwater aquatic organisms (180 ng/g ww), respectively. All samples were above screening levels listed by the USFWS for contaminants in tissue of aquatic biota in San Diego Bay (Zeeman, 2016).

3.4.9 Selenium

Among embayments, mean concentrations of selenium in fish tissue ranged from 0.24 µg/g ww in Dana Point Harbor to 0.42 µg/g ww in South San Diego Bay (Figure 3-17).

Among feeding guilds, the predator invertebrate feeding guild showed significantly lower concentrations of total selenium in fish tissue compared to the other three guilds. Total selenium concentrations in fish tissue among species had little variation, with a range between 0.15 and 0.63 µg/g ww.

Relationships to human health and ecological risk guidelines are described in the following selenium Screening Level Risk Assessment section.

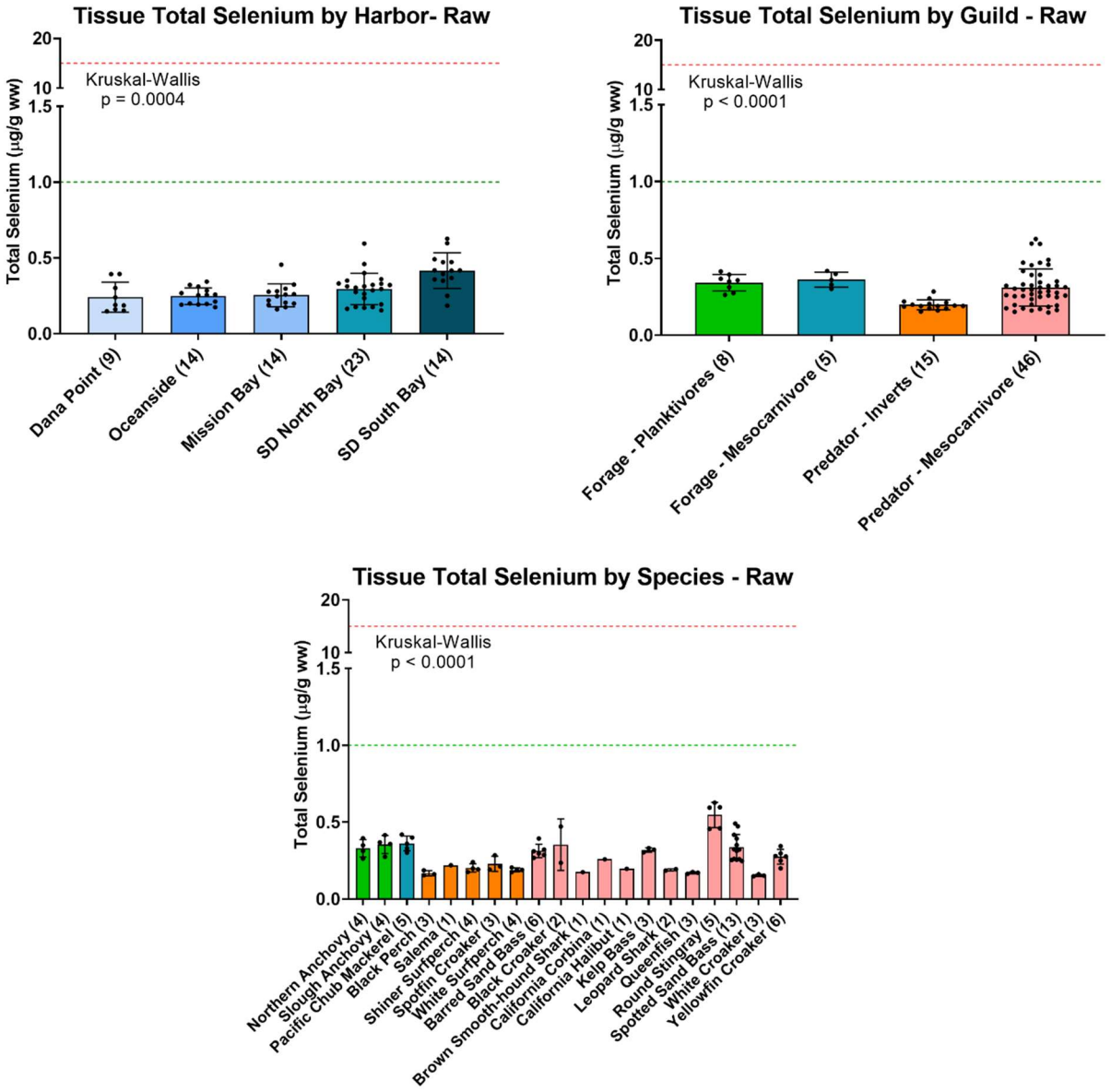


Figure 3-17. Tissue Concentrations of Selenium Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the upper and lower OEHHA ATLs of seven servings per week (1.0 µg/g ww, in green) and "do not consume" (15 µg/g ww, in red). Statistical comparisons were performed using a Kruskal-Wallis ANOVA on ranks with multiple comparisons. Tissue concentrations were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

Screening Level Risk Assessment

The concentrations of selenium in tissues were compared with several screening-level guidelines based on both human health and wildlife risk. Analyses were performed on fillet samples with the exception of northern anchovy and slough anchovy, in which the entire organism was analyzed, and shiner surfperch, in which the entire organism was analyzed after removal of the head, tail and internal organs. Comparisons are as follows:

- **OEHHA Fish Consumption ATLs:** Tissue concentrations at or below 1.0 µg/g ww (7 servings per week), 1.8 to 15 µg/g ww (no more than 3 servings per week), and > 15 µg/g (no consumption).
- **OEHHA FCG**: Target tissue level is 7,400 ng/g ww (7.4 µg/g) for individuals consuming approximately 8 oz. per week, or approximately 32 g/day.
- **Oregon DEQ (2007):** Lowest ATL for applicable wildlife (0.036 µg/g ww for mammals and 0.23 µg/g ww for individual birds); ATL for humans (20 µg/g ww – general/recreational); and the CTL in fish, shellfish, or other saltwater aquatic organisms (0.34 µg/g ww).
- **SFBRWQCB TMDL for selenium in San Francisco Bay:** 8.0 µg/g dw whole body fish tissue or 11.3 µg/g dw mussel tissue to protect both wildlife and human health.

All fish tissue samples had concentrations of total selenium less than the most conservative OEHHA ATL of 1.0 µg/g ww (Figure 3-17). Fish analyzed in 2013 were all below 1.0 µg/g ww except for one round stingray from South San Diego Bay.

All samples exceeded the lowest ATL for applicable wildlife established by the Oregon DEQ of 0.036 µg/g ww for mammals, and many (68%) exceeded the 0.23 µg/g ww for individual birds. Applicability of selenium ATL and CTL values derived by the Oregon DEQ to species found in the San Diego region is uncertain at this time without further investigation.

3.5 Multivariate Trends in Fish Tissue Concentrations

Fish tissue accumulates contaminants in complex mixtures that can vary by region, species, and feeding guild. To visualize the variability between these factors, multivariate comparisons of tissue chemistry data were performed using Primer v7 software. The 10 species selected for this analysis were chosen based on 1) representing multiple feeding guilds and 2) present in at least 3 of the 5 embayment zones sampled for this study (with the exception of slough and northern anchovy which were only present in both regions of San Diego Bay).

Variables included in the principal components analysis (PCA) included COPCs with ATLs (mercury, selenium, lipid-normalized total chlordanes, lipid-normalized total DDTs, lipid-normalized PBDEs, and lipid-normalized total PCBs). The resulting PCA (Figure 3-18) captured a total of 65.1% of the variability between samples (PC1 40.4%, PC2 24.8%), which suggests that the results are a good reflection of the variability between samples. Using the BEST/BIOENV routine in Primer showed that the combination of mercury, lipid-normalized total PCBs and lipid-normalized total DDTs accounted for most of the variation in the PCA (correlation coefficient of 0.83). Each PCA in Figures 3-18 through 3-20 is identical with each showing different factors (region, species, feeding guild).

For each factor (Region, Species, Guild), a permutational multivariate ANOVA (number of permutations=9,999) based on Euclidean distances between samples with pairwise comparisons was performed to look for differences between each factor group. Results are as follows:

- Regions were significantly different from one another (p=0.0001), although pairwise comparisons showed there were some pairs that did not differ significantly. Samples from Dana Point Harbor were not significantly different Mission Bay or Oceanside Harbor. North and South San Diego Bay were not significantly different from one another. All other pairwise comparisons were significantly different from one another.
- There were significant differences between species (p=0.0001; complete pairwise comparisons of species can be found in Appendix C). Notably, some species that were within the same family were less likely to be significantly different from one another. For example, barred sand bass and spotted sand bass were not significantly different from one another (p=0.57), while perch species (black, white and shiner) only showed shiner and white surfperch to be significantly different (p=0.03). An exception was northern anchovy and slough anchovy, which were significantly different from one another (p=0.009).
- All feeding guilds were significantly different from one another (p=0.0001).

Given that the 2018 RHMP report showed significant differences in the sediment chemical concentrations between harbors (Wood, 2020), the fact that fish accumulate different mixtures in their tissues based on the region they were captured is not unexpected. It appears the smaller regions (Dana Point, Oceanside Harbor, and Mission Bay) grouped together while San Diego Bay ecoregions grouped together, which is likely due to similar species composition and sediment COPC concentrations that result in these groups. Differences in tissue concentrations between species is also not unexpected; however, this is the first time for RHMP that detailed trophic position and diet of fishes has been considered as a factor. Forage fish appear to accumulate total PCBs, DDTs, and chlordanes more than other guilds, while predator fish with mixed invertebrate/fish diets (mesocarnivores) such as round stingrays and spotted sand bass had more selenium and mercury. The three perch species, which prey exclusively on invertebrates, were tightly grouped together despite the size difference between species and the multiple harbors they were collected from.

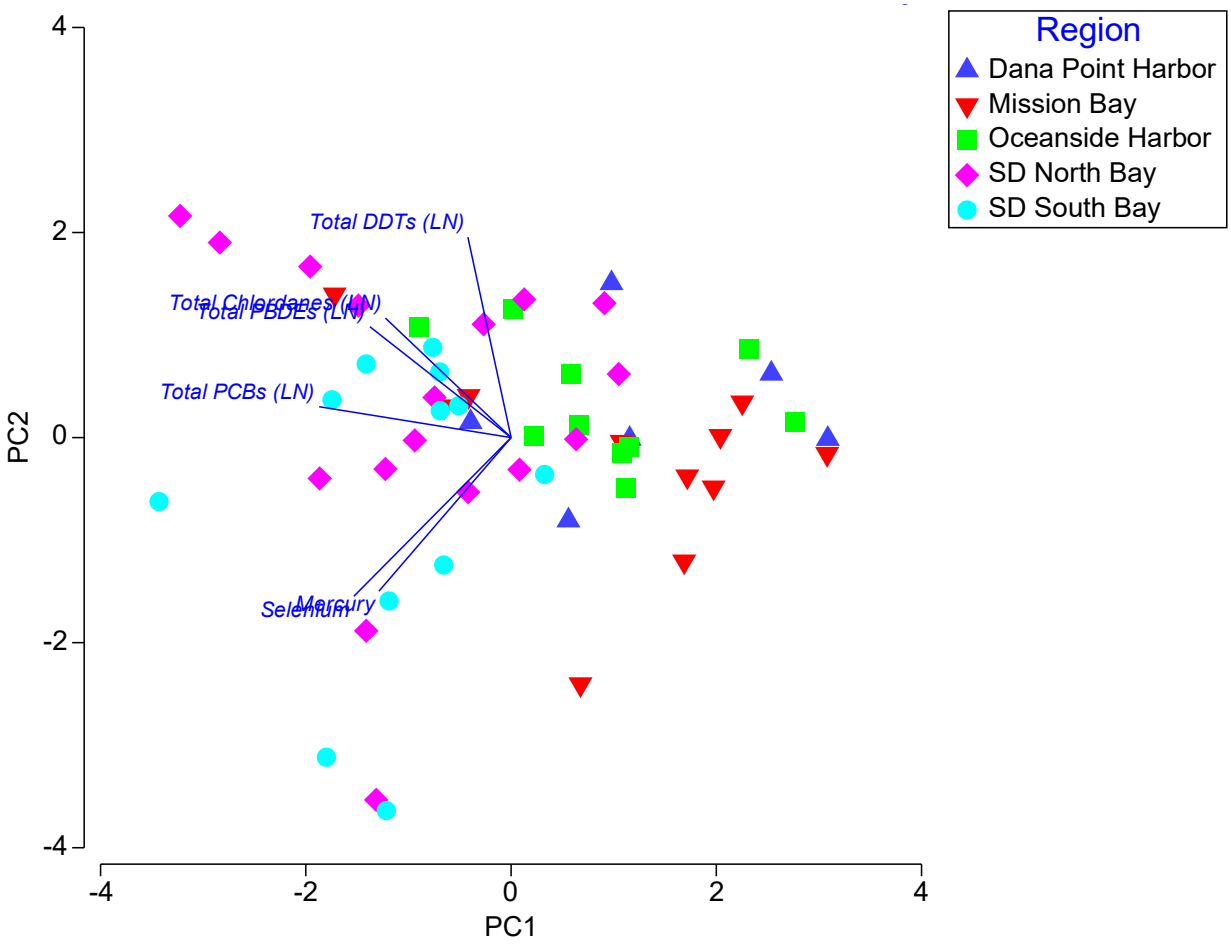


Figure 3-18. Principal Components Analysis of Fish Tissue Chemistry by Region

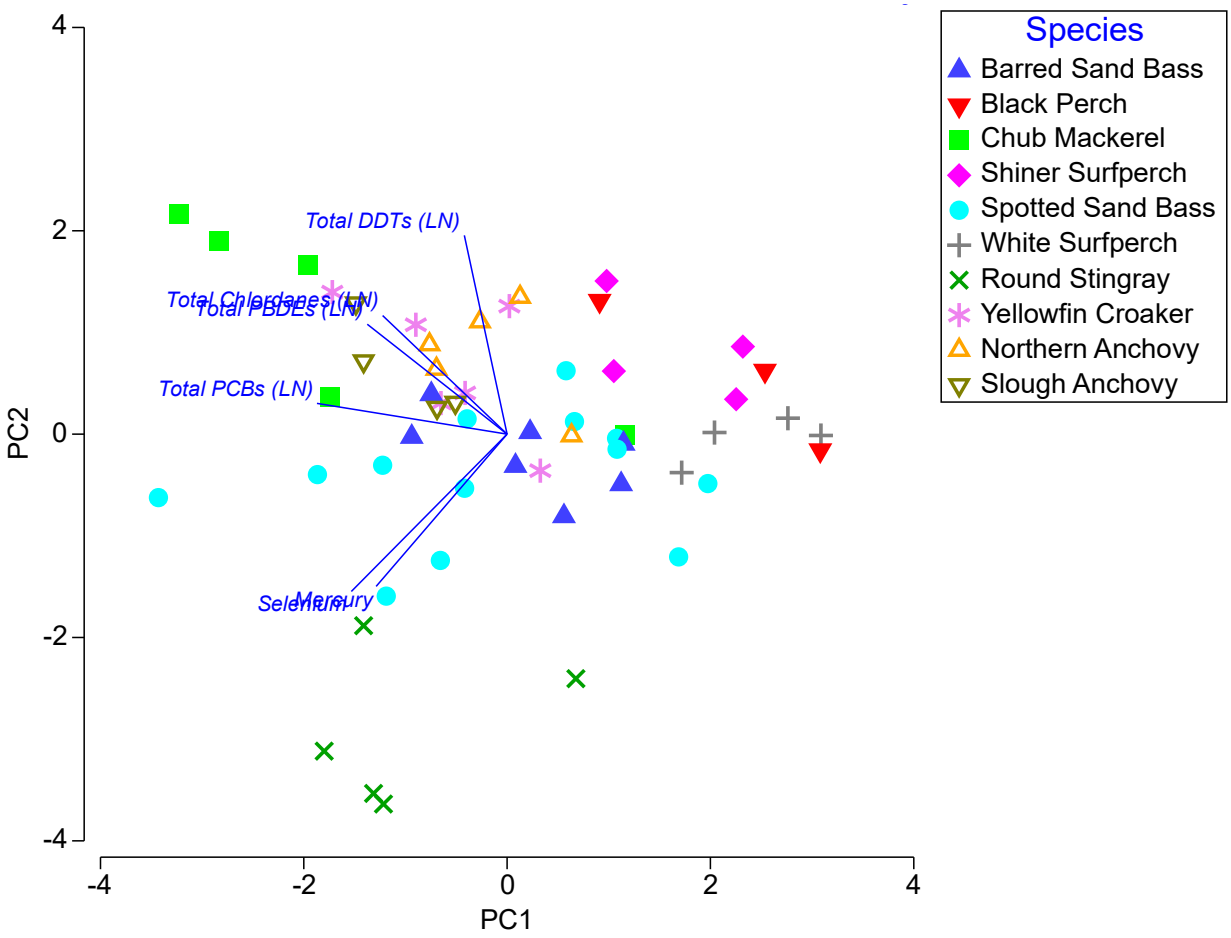


Figure 3-19. Principal Components Analysis of Fish Tissue Chemistry by Species

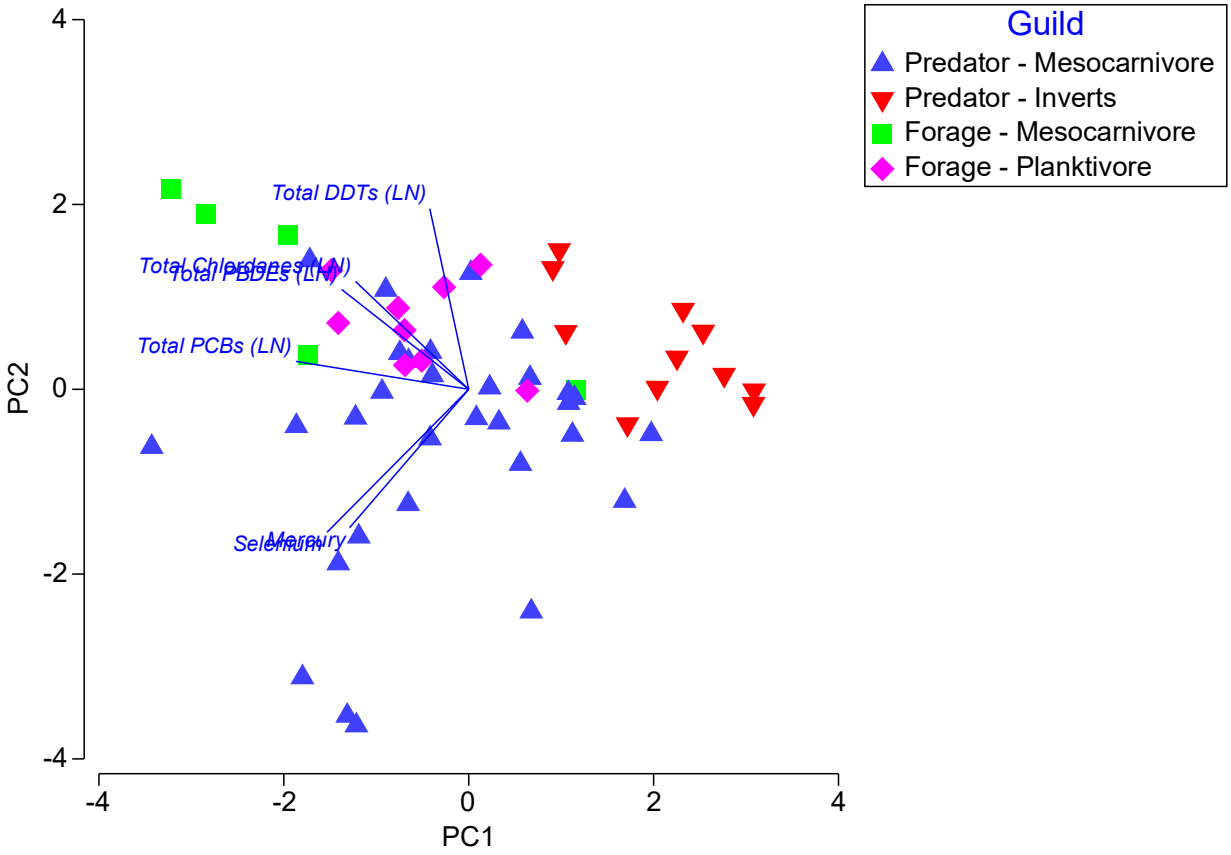


Figure 3-20. Principal Components Analysis of Fish Tissue Chemistry by Feeding Guild

3.6 Biota to Sediment Accumulation Factors

An evaluation of BSAF values provides another method to assess the exposure pathway relationships between aquatic species and sediments. Direct exposure to sediments is not the only route of exposure required to accurately model the relative contribution of sediments to tissue COPC concentrations. Direct exposure such as dissolved COPCs (Wood 2019) and particulate-associated COPCs that may be taken up by fish through respiration and incidental ingestion of sediments (Melwani et al. 2009) in addition to food-web trophic transfer (consumption of fish and invertebrates) will also result in bioaccumulation (SWRCB 2018). In addition, there are several potential confounding factors that may influence bioaccumulation, including site-specific sediment characteristics and the age, physiology, and feeding behavior of an organism (Bay et al., 2016). However, BSAFs are a simple model that attempts to capture some of the variability through all these routes, as prey such as invertebrates are usually closely associated with sediments, and sediments within an area are the most likely to be the ones resuspended and impact dissolved concentrations in the water column. This association was demonstrated for PCBs in the SCCWRP Dissolved Organochlorine study within San Diego Bay, where the highest flux of PCBs was found at stations with the highest sediment concentration, and modeling showed that diffusive flux of PCBs from legacy contamination of the sediment is sufficient to account for present-day concentration of PCBs in the water column (SCCWRP 2020). While more complex modeling is desirable to capture all of these factors, BSAFs provide a good simplistic starting point with well documented use and value. BSAF values equal to 1.0 indicate a comparable concentration of contaminants in the sediment and fish, while BSAF values > 1 indicate enhanced chemical concentrations in the fish tissue relative to that in the sediments (bioaccumulation).

BSAFs for fish by harbor, feeding guild, and species are presented in Figures 3-21 through 3-27 for total chlordanes, total DDTs, total PBDEs, total PCBs, arsenic, mercury, and selenium. Graphs for organics (chlordanes, DDTs, PBDEs, and PCBs) include concentration data that were normalized for lipid concentrations (tissues), and total organic carbon content (sediment). This normalization typically reduces the variability that may be encountered by potential confounding factors for a more accurate comparison between regions, feeding guilds and species for lipophilic compounds (Bay et al., 2016). Graphs for metals (arsenic, mercury, and selenium) include raw concentration data for both tissues and sediment. BSAFs between groups were analyzed for statistical significance using a Kruskal-Wallis one-way ANOVA with Dunn's multiple comparisons test for pairwise analysis. Results from the global, one-way ANOVA test are presented in graphs; pairwise comparisons are provided in Appendix C.

For the exercise presented in this report, all BSAFs are calculated and reported for each tissue composite sample using 2013 and 2018 RHMP sediment concentrations averaged across each harbor (or in the case of San Diego Bay broken into two regions, north and south), as described in Section 2.4.3. This method is employed knowing that fish frequently move over large areas. Using an average sediment concentration derived over a large composite area thus provides a more representative value that fish may be exposed to as they move around assuming their home range extends across each region. Note that this is a significant assumption and limitation given that actual home ranges for the various species found in the San Diego Regional Harbors is not well known and will also vary considerably based on the individual species as shown previously in Table 3-1. The presentation of all BSAFs in this report shall keep this caveat in mind. Despite

this important caveat and the knowledge that there are multiple chemical exposure pathways aside from direct sediment exposure, many of the BSAF values calculated and presented herein do follow expected patterns based on the literature and prior studies in the San Diego Regional Harbors (Amec Foster Wheeler 2017a and 2017b; Wood 2019; Bay and Parks, 2020).

Total Chlordanes

BSAF values for chlordanes ranged from 0.04 (kelp bass in North San Diego Bay) indicating no link to regional sediment concentrations, to 23.2 for yellowfin croaker in Oceanside Harbor indicating enhanced bioaccumulation relative to regional sediments for this species. There were statistically significant differences between harbors for total chlordanes (Figure 3-21), with higher BSAFs in Oceanside Harbor, Dana Point Harbor and Mission Bay relative to both regions of San Diego Bay. This is likely due to the large number of non-detects for this chemical class in the sediments of those three harbors (see Figure 3-8), which can skew BSAFs and their interpretation. Predator fish had higher average BSAFs than forage fish (although not significantly so), which was driven primarily by species such as spotfin croaker, spotted and barred sand bass, and yellowfin croaker.

Total DDTs

BSAF values for total DDTs ranged from 0.06 (round stingray in South San Diego Bay) to 224 (brown smooth-hound shark in Mission Bay). Most of the fish species analyzed exhibit BSAF values greater than 1.0 indicating bioaccumulative potential from the sediments for this chemical. There were statistically significant differences between harbors (Figure 3-22), with Oceanside Harbor and Mission Bay exhibiting greater BSAF values than that observed in the other three regions for total DDTs. Planktivorous forage fish had significantly lower BSAFs compared to the other feeding guilds, which all had similar average BSAFs. The higher BSAFs in predator fish was driven by species such as brown smooth-hound shark, yellowfin croaker, and salema.

Dieldrin

Dieldrin was not detected in any sediment or tissue samples during the 2018 RHMP. Therefore, BSAFs were not calculated for this chemical.

Total PAHs

PAHs were not detected in any tissue samples in 2018. Therefore, BSAFs were not calculated for this chemical.

Total PBDEs

BSAF values for total PBDEs ranged from 0.01 to 11.57 (brown smooth-hound shark in Mission Bay). Mean species-specific BSAF values were all less than 2.0 with the exception of the brown smooth-hound shark, indicating limited bioaccumulation of this chemical relative to measurements in regional sediments. Despite limited bioaccumulation potential overall, patterns in BSAF values observed are briefly summarized herein for comparison. There were statistically significant differences between harbors (Figure 3-23) with Mission Bay having the highest average BSAF and Dana Point Harbor with the lowest average BSAF for total PBDEs. There were

also significant differences between guilds, with mesocarnivore forage fish having the highest average BSAFs. Note that this guild only consists of 5 composites of Pacific chub mackerel.

Total PCBs

BSAF values for total PCBs ranged from 0.24 (kelp bass in North San Diego Bay) to 284 (yellowfin croaker in Mission Bay). Most of the fish species analyzed exhibit BSAF values greater than 5.0 indicating high bioaccumulative potential from the sediments for total PCBs. There were statistically significant differences between harbors (Figure 3-24) with Mission Bay having the highest average BSAFs, followed by Oceanside Harbor, South San Diego Bay, Dana Point Harbor, and North San Diego Bay with the lowest average BSAFs. These observations correspond well with the relatively low average concentrations of total PCBs in the three northern harbors compared to that in San Diego Bay. This suggests that the home range for some of these fish may extend between harbors or into areas with high sediment concentrations that were not sampled and included in the model, or that there are other routes of exposure not captured in the BSAF that have an influence on tissue concentrations. There were no significant differences between guilds, although mesocarnivore predator fish had the highest average BSAF. The high BSAFs in that guild were driven by yellowfin croaker, brown smooth-hound shark, California corbina, and California halibut.

Arsenic

BSAF values for arsenic ranged from 0.04 (white croaker in Dana Point Harbor) to 1.59 (California corbina in Mission Bay). Most of the fish species analyzed exhibit BSAF values less than 1.0 indicating overall limited bioaccumulative potential from the sediments for arsenic. Despite limited bioaccumulation potential overall, patterns in BSAF values observed are briefly summarized herein for comparison. While not statistically significant, South San Diego Bay and Mission Bay had the highest average BSAFs for arsenic (Figure 3-25). There were no significant differences between guilds, but mesocarnivore predator fish had the highest average BSAF value, with the highest individual BSAFs driven by California corbina, leopard shark, brown smooth-hound shark, and round stingray.

Mercury

BSAF values for mercury ranged from 0.03 (northern anchovy in North San Diego Bay) to 7.62 (brown smooth-hound shark in Mission Bay). Most of the fish species analyzed exhibit BSAF values less than 1.0 indicating overall limited bioaccumulative potential from the sediments for mercury. Despite limited bioaccumulation potential, patterns observed are still briefly summarized herein. There were statistically significant differences between harbors (Figure 3-26), with the highest average BSAFs fir mercury in Dana Point Harbor, Mission Bay and South San Diego Bay. As with several of the organic compounds, these observations correspond well with the relatively low average concentrations of mercury in the three northern harbors compared to that in San Diego Bay. Mesocarnivore predator fish had significantly higher BSAFs than other feeding guilds, while planktivorous forage fish had the lowest average BSAFs. The high BSAFs in predator fish was driven by brown smooth-hound shark, leopard shark, white croaker, and yellowfin croaker.

Selenium

BSAF values for selenium ranged from 0.21 (white croaker in Dana Point Harbor) to 2.15 (round stingray in North San Diego Bay). Most of the fish species analyzed exhibit BSAF values less than 1.0 indicating overall limited bioaccumulative potential from the sediments for selenium. Despite limited bioaccumulation potential overall, patterns in BSAF values observed are briefly summarized herein for comparison. North and South San Diego Bay had statistically significantly higher BSAFs than the other three regions for selenium (Figure 3-27), with Dana Point Harbor having the lowest average BSAF. Predator fish that feed on invertebrates (surfperches) had significantly lower BSAFs compared to the other three guilds, which all had similar average BSAFs. Fish species that had the highest average BSAFs included round stingrays, kelp bass, black croaker, Pacific chub mackerel, northern anchovy, and slough anchovy.

Historical BSAF Values

Fish BSAF values were calculated in the assessment of bioaccumulation in San Diego Bay study using fish tissues and sediment grabs from 2013-2014 (Bay et al. 2016). BSAFs normalized for lipid content and total organic carbon were calculated for total chlordanes, total DDTs, total PDBEs and total PCBs. While there was some species overlap between both studies, for broader comparisons that include species that were not captured in both studies the range for each feeding guild for the four COPCs is presented in Table 3-3. The 2013-2014 only dataset included fish from San Diego Bay, while the 2018 data includes fish from all four RHMP embayments.

Normalized BSAFs from 2018 for chlordanes, DDTs, and PBDEs all fell within the range of values measured in 2013-2014, and in most cases the range in 2018 was lower than that observed in 2013-2014. Normalized BSAFs for PCBs showed more variation in the ranges across guilds from 2013-2014 to 2018, however the values were consistent with what has been measured in the past.

Table 3-3. Range of Normalized BSAFs for Fish Guilds from 2013-2014 and 2018 Bioaccumulation Studies

Analyte	Guild 2013/2014[a]	Normalized BSAF ((ng ww/g lipid)/(ng/g OC dw))			
		2013/2014[a]	Count	2018[b]	Count
Chlordanes	Forage - Planktivore	0.38-78.1	32	0.36-0.97	8
	Predator - Inverts	0.04-7.64	9	0.11-8.89	15
	Predator - Mesocarnivore	0.21-66.5	43	0.04-23.2	46
DDTs	Forage - Planktivore	2.65-536	32	0.76-2.10	8
	Predator - Inverts	0.06-32.4	9	1.15-32.8	15
	Predator - Mesocarnivore	1.38-517	43	0.06-224	46
PBDEs	Forage - Planktivore	0.00-10.2	32	0.06-0.26	8
	Predator - Inverts	0.65-8.43	9	0.01-1.16	15
	Predator - Mesocarnivore	0.03-135	43	0.01-11.6	46
PCBs	Forage - Planktivore	1.59-59.8	32	1.11-7.89	8
	Predator - Inverts	0.27-7.62	9	0.50-26.5	15
	Predator - Mesocarnivore	0.40-110	43	0.24-285	46

Notes:

[a]- The 2013/14 BSAF ranges are derived from fish tissue collected in San Diego Bay only (Bay, S.M., D.J. Greenstein, A.N. Parks, C.Q.T. Zeeman. 2016. Assessment of Bioaccumulation in San Diego Bay. Technical Report 953. Southern California Coastal Water Research Project Authority. Costa Mesa, CA).

[b]- The 2018 BSAF ranges are derived from fish tissue samples collected in Dana Point Harbor, Oceanside Harbor, Mission Bay, and San Diego Bay.

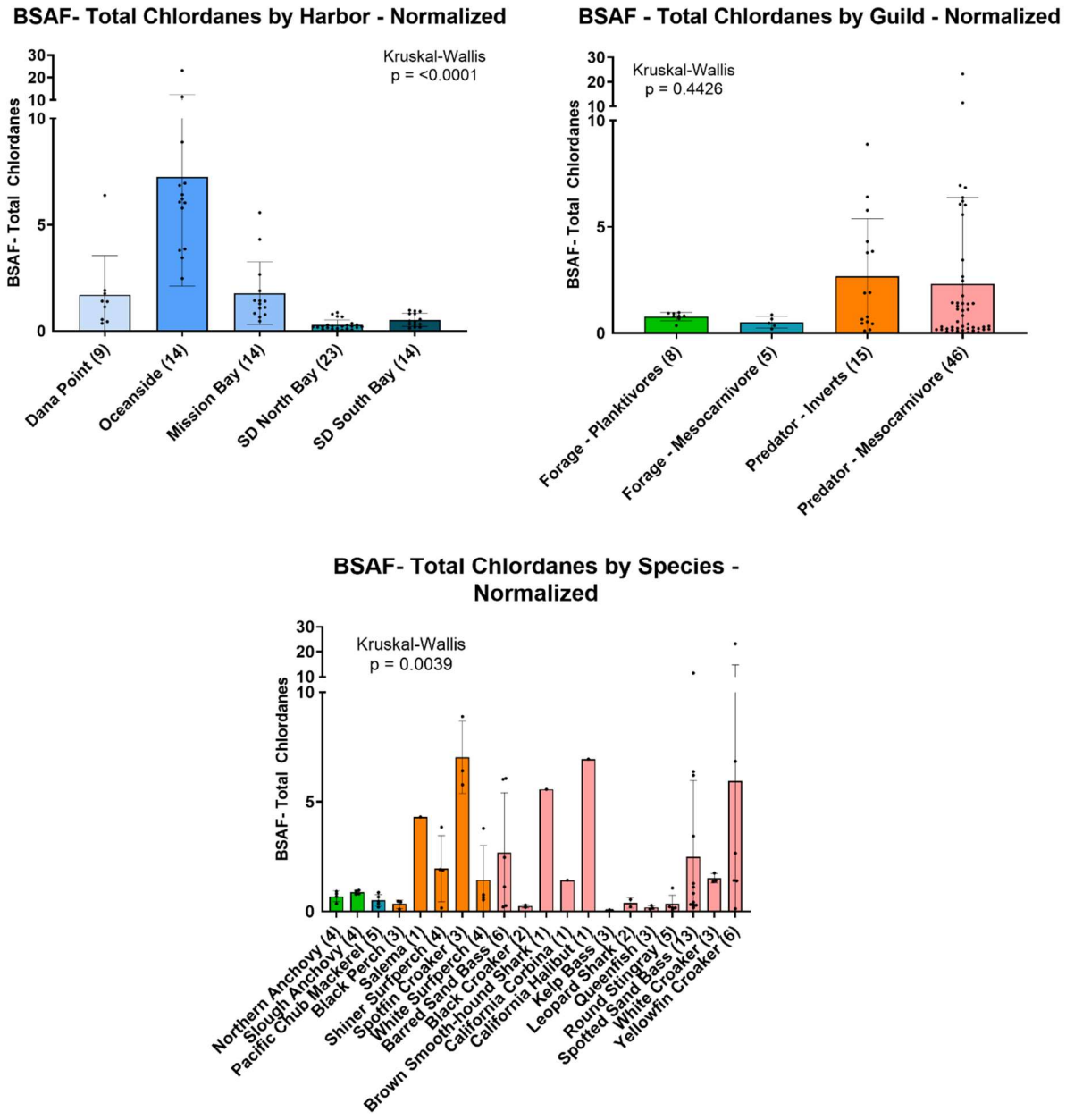


Figure 3-21. Biota to Sediment Accumulation Factors for Total Chlordanes Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

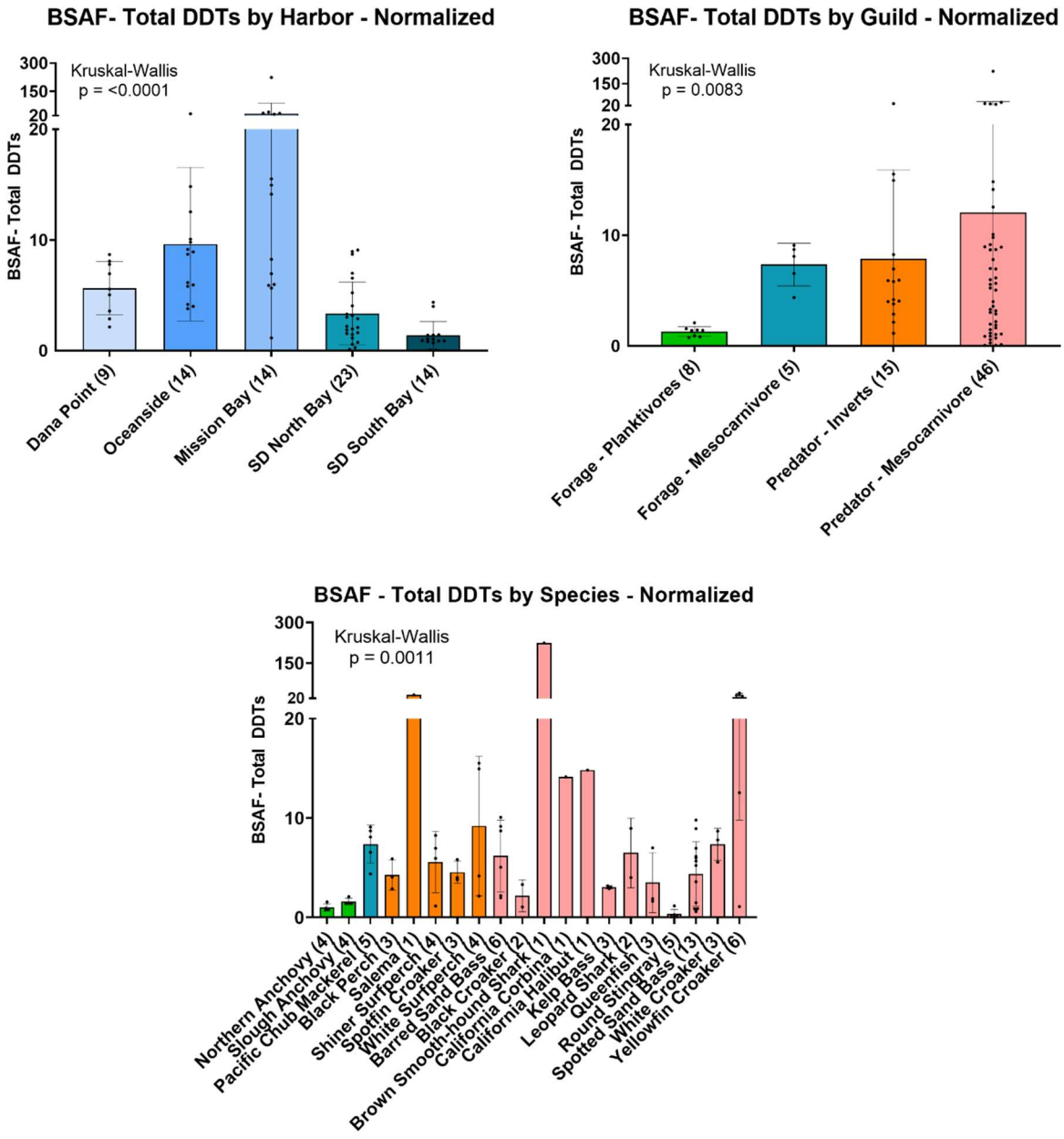


Figure 3-22. Biota to Sediment Accumulation Factors for Total DDTs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

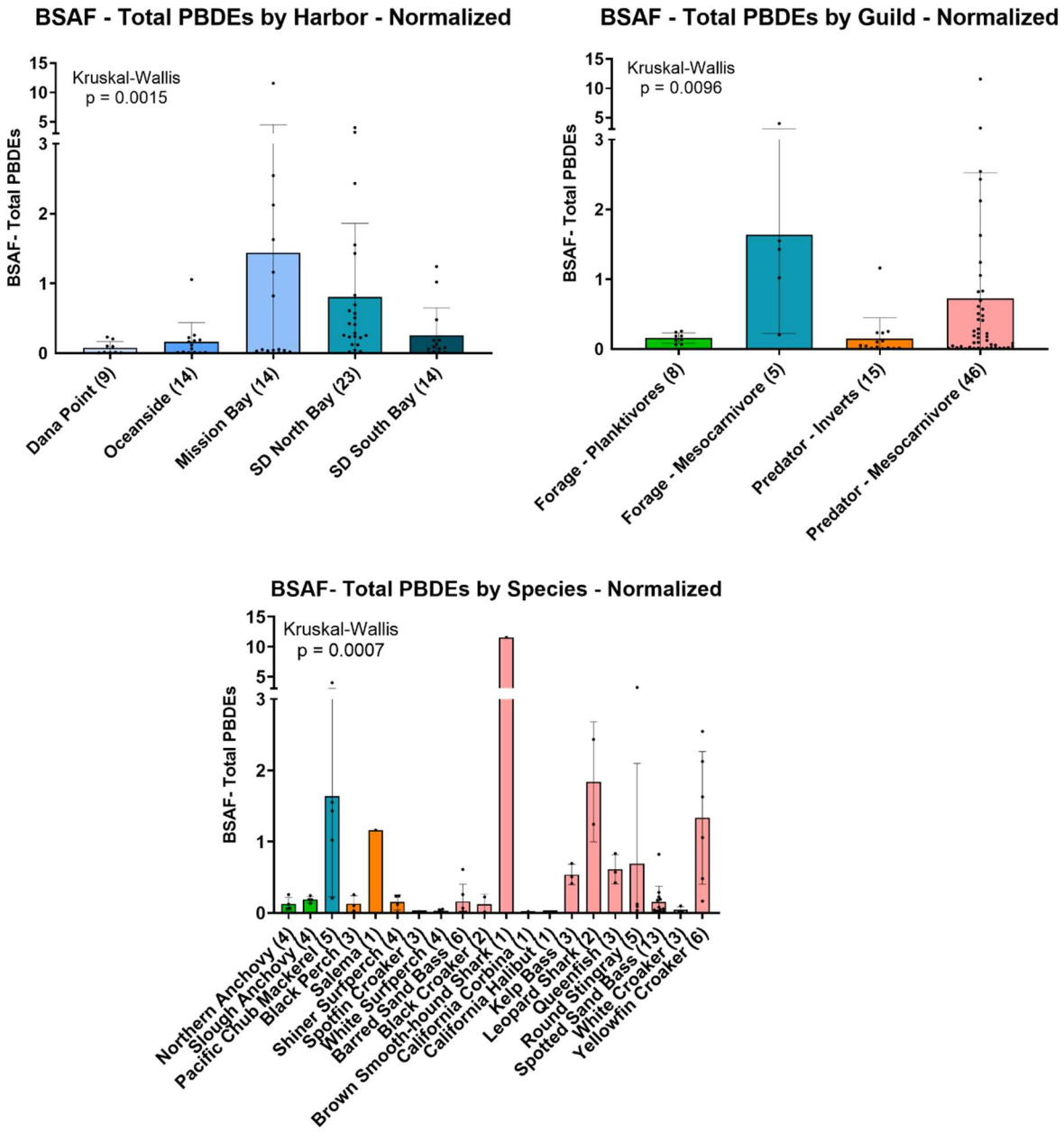


Figure 3-23. Biota to Sediment Accumulation Factors for Total PBDEs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

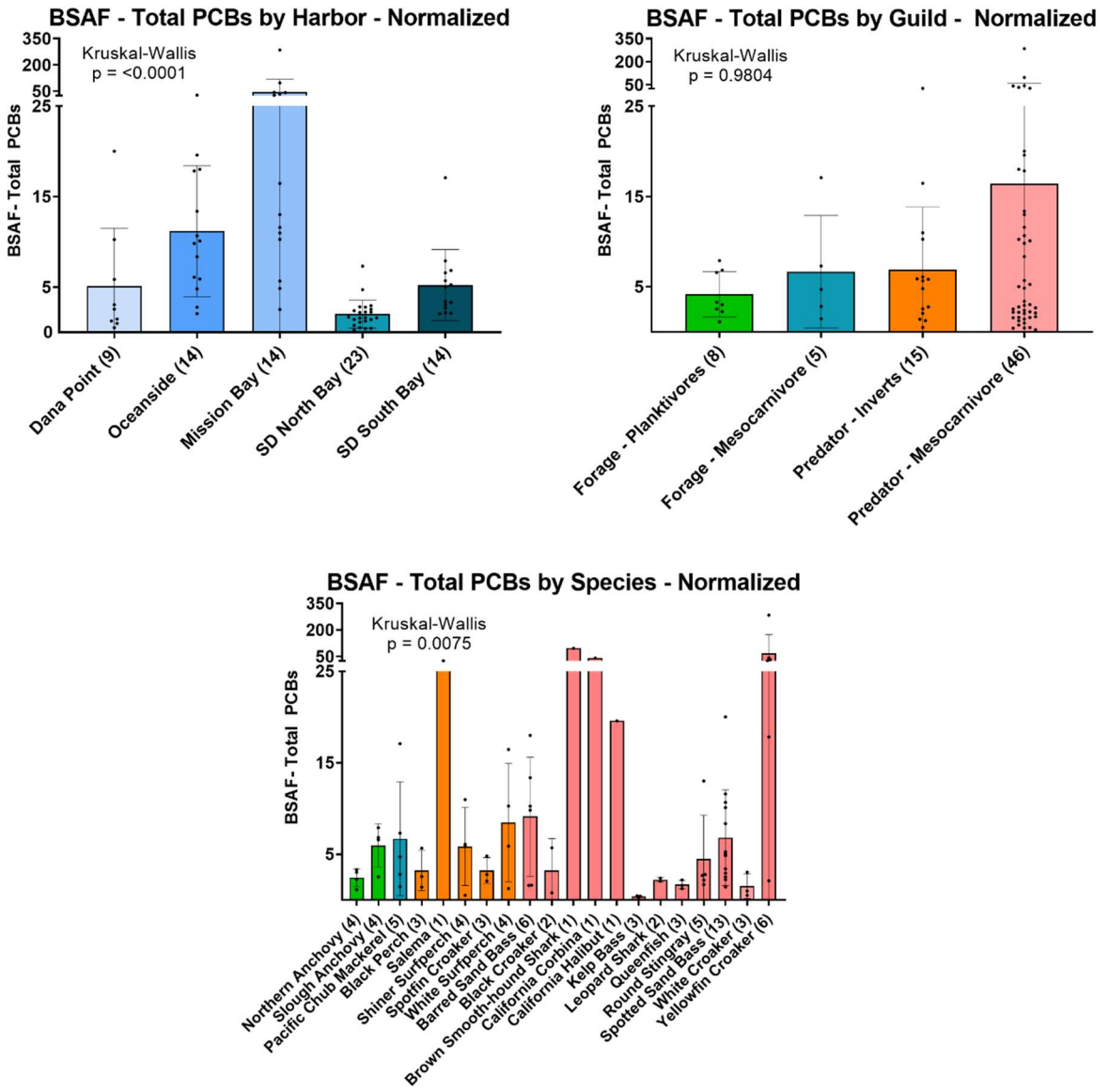


Figure 3-24. Biota to Sediment Accumulation Factors for Total PCBs Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

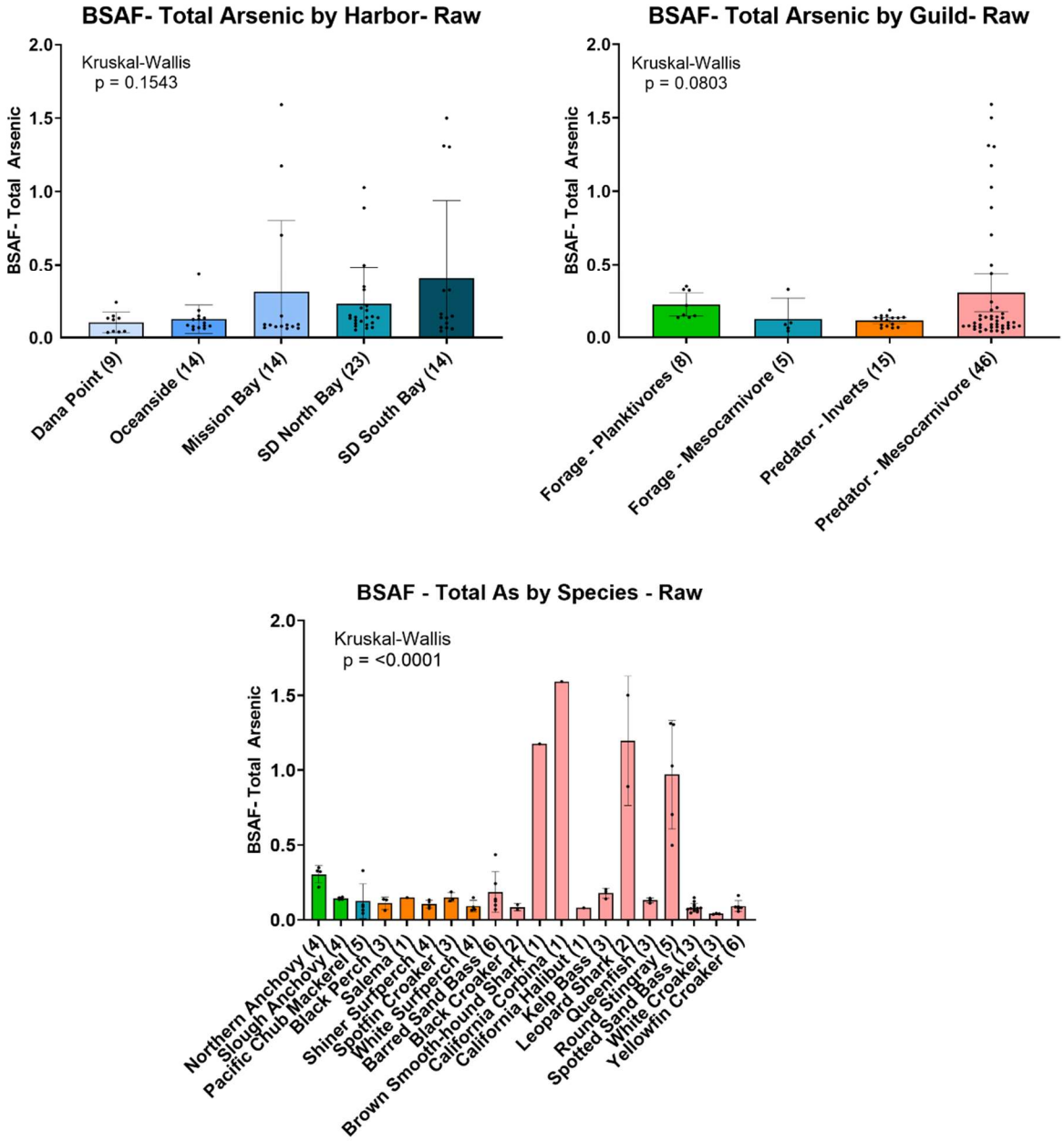


Figure 3-25. Biota to Sediment Accumulation Factors for Arsenic Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

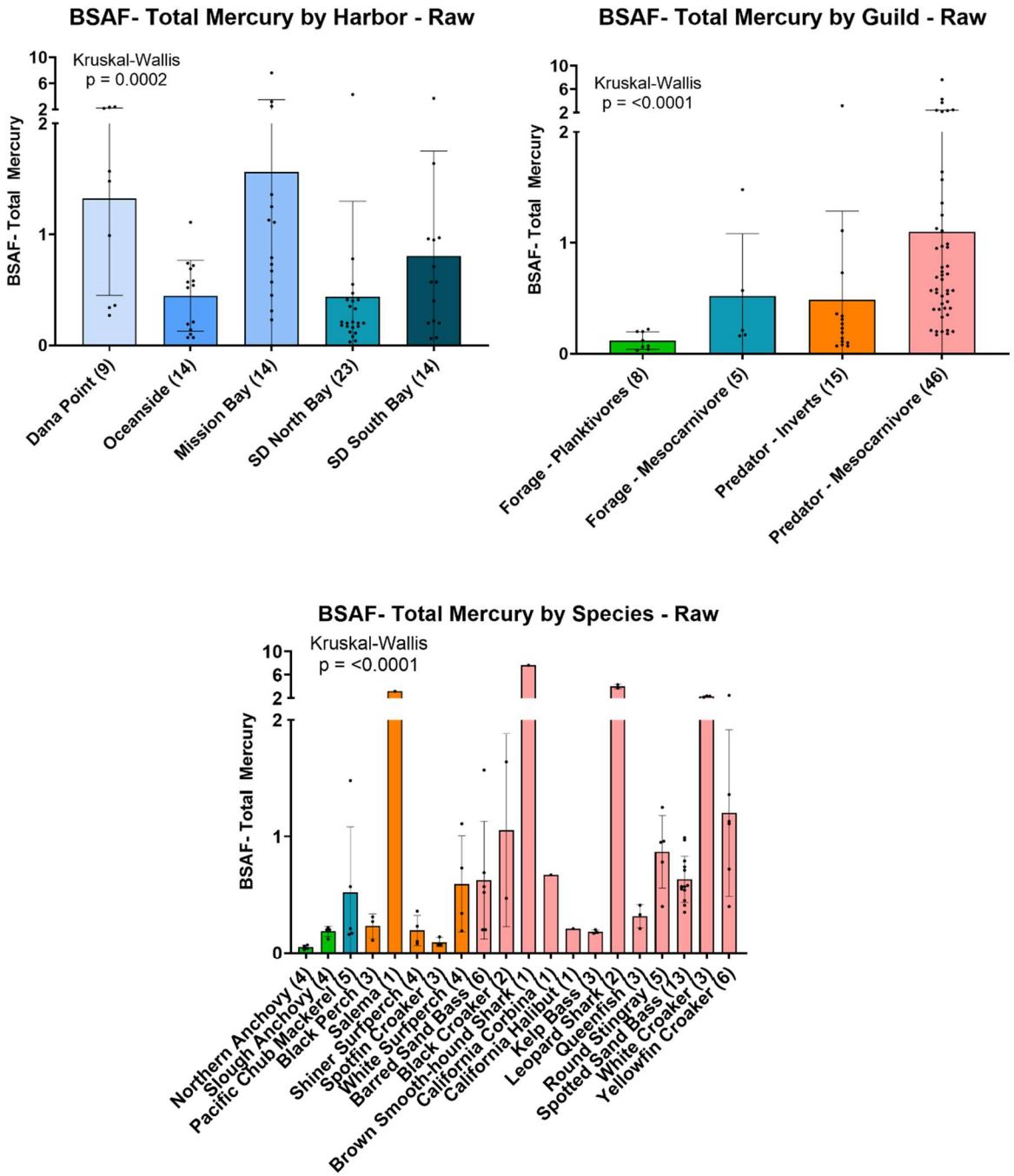


Figure 3-26. Biota to Sediment Accumulation Factors for Mercury Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

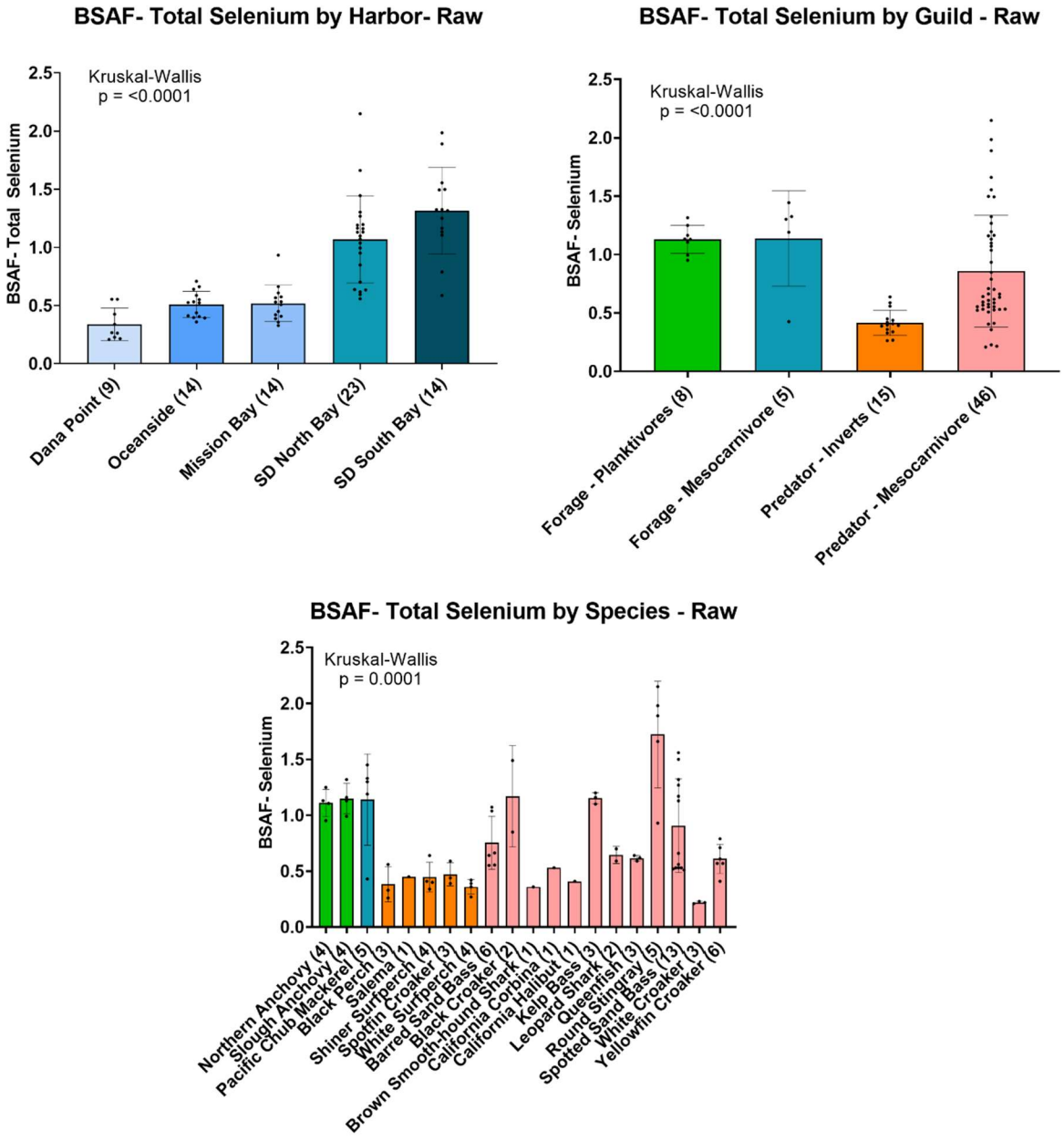


Figure 3-27. Biota to Sediment Accumulation Factors for Selenium Across Harbors, Feeding Guilds, and Species

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. Statistical significance between groups ($p \leq 0.05$) was determined using a Kruskal-Wallis ANOVA test. BSAFs were transformed using a log(y+1) transformation prior to statistical analyses. The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis.

3.7 Historical Tissue Concentrations by Harbor

An evaluation of historical tissue concentrations was performed for total PCBs and mercury, as these two COPCs had the most exceedances of ATLs and ecological risk thresholds. Total PCBs were analyzed for unnormalized and lipid-normalized concentrations to account for interannual variability in lipid content. Data used in this evaluation were compiled from the RHMP in 2008, 2013, and 2018. Fish tissue data collected as part of the 2008 RHMP (fish capture in 2009) was presented in the State of California SWAMP Bioaccumulation in Sportfish Study published in 2012 (Davis et al., 2012). Note that the SWAMP Program with data collected in 2009 analyzed 56 PCB congeners while 62 congeners were analyzed and reported during RHMP in 2013 and 2018. Note that while not included here, analysis of all 209 congeners would provide a more accurate representation of total PCBs in tissues. A side-by-side analysis of the most recent data collected in 2018 with and without the missing congeners in 2009 found limited difference in the total PCB concentrations reported (<10%), therefore no adjustments were made for the historical comparisons presented herein. The 2009 and 2018 studies were part of the State of California assessment of fish tissues for human consumption, therefore tissues analyzed were skin off filets for sport fish and for smaller fish they had the head, tail and guts removed. The 2013 study was performed with primarily ecological risk assessment in mind with tissue composites made using only whole fish. The difference in fish processing methods could possibly result in higher concentrations measured in the whole fish from 2013 compared to just muscle tissue for 2009 and 2018, so this difference should be noted when interpreting results.

This section highlights historical fish tissue concentration data but does not attempt to include or make conclusions related to trends due to limited comparable datasets to provide a statistically robust assessment. Although composite tissue data is limited for several species and consistent sampling locations over time, these data are still presented highlighting what is available for simple comparison purposes.

Historical analysis of tissue concentrations over the past 10 years was performed on a region-by-region basis as the species composition and sediment characteristics vary among harbors. Fish species were selected for each harbor based on the criteria that 1) they were captured in as many years as possible 2) had the most replication as possible and 3) represented as many feeding guilds as possible. Not all species were sampled in every year for each harbor. Comparisons to OEHHA human health ATL values are provided for context as well. Separate ATL values are available for 1 to 7 allowable meals per week plus an upper “do not consume” threshold. Consistent with results provided earlier in the Results Section 3.3, only the least restrictive ATL (up to 7 meals per week) and the most restrictive “do not consume” thresholds are shown on figures where appropriate. Specific ATL concentration ranges for the consumption of 1-6 meals per week are provided in Table 2-3 as reported in OEHHA, 2008.

Historical analysis of fish tissue data for Dana Point Harbor was performed for white croaker, shiner surfperch, and white surfperch (Figure 3-28). White croaker had similar concentrations for unnormalized and lipid-normalized PCBs in 2018 compared to 2009, all with concentrations below the least conservative ATL allowing consumption of up to 7 meals per week. Shiner surfperch and white surfperch had lower PCB concentrations in 2018 compared to 2009, both above the least conservative ATL threshold, but less than the no consumption threshold. Shiner surfperch and

white surfperch had similar tissue concentration of mercury in 2009 and 2018, with no concentrations greater than any of the ATLs. Mercury in white croaker increased in 2018 compared to 2009, with 2018 concentrations falling within the 2 servings per week ATL range for women 18-45 and children 1-17 (up from 3 servings per week) and no more than 5 servings per week ATL range for men and women >45 (up from 7 servings per week).

Fish tissue data for Oceanside Harbor were analyzed for spotfin croaker, yellowfin croaker and white surfperch (Figure 3-29). Concentrations of total PCBs across survey years varied by species. Yellowfin croaker tissues showed increased PCBs in 2018 compared to 2009, while white surfperch had a decrease in tissue concentrations which was less pronounced when comparing lipid-normalized concentrations. Spotfin croaker was the only species analyzed in 2009, 2013 and 2018 in Oceanside Harbor, and PCB concentrations in 2013 were more than 10 times higher compared to 2009 and 2018. This in part may have been a result of whole fish analysis in 2013 compared to skin-off filets in 2009 and 2018. Yellowfin croaker was the only species with tissue concentrations of total PCBs greater than an ATL value in 2018, with a mean concentration similar to the least restrictive ATL allowing consumption of up to 7 meals per week. Mercury was only measured in spotfin croaker and yellowfin croaker in Oceanside, with spotfin croaker tissue concentrations remaining relatively consistent across years and below the 7 servings per week ATL for women 18-45 and children in all three years. Mercury concentrations in yellowfin croaker in 2009 were below the 7 servings per week ATL for women 18-45 and children, but the average tissue concentration in 2018 increased to the 2 servings per week ATL range for the same group, and the 4 servings per week ATL range for men and women >45.

Fish tissue data for Mission Bay were analyzed for spotted sand bass, white surfperch, and yellowfin croaker (Figure 3-30). Each species exceeded the 7 servings per week ATL for total PCBs in only one year, but that year differed between species with spotted sand bass having the highest concentrations in 2013, white surfperch in 2009, and yellowfin croaker in 2018. When normalized for lipids, white surfperch and yellowfin croaker had the highest average total PCB concentrations in 2018, while spotted sand bass had the highest tissue concentration in 2013. Elevated tissue concentrations in 2013 could be the result of analyzing whole fish as opposed to skin off filets in 2009 and 2018. Average concentrations of mercury in spotted sand bass have decreased from within the 2 servings per week ATL range for women 18-45 and children to within the 4 servings per week ATL range. White surfperch and yellowfin croaker have exceeded the 7 servings per week ATL for women 18-45 and children in both 2009 and 2018, with a slight increase in mercury concentrations for both species. White surfperch did not exceed the 7 servings per week ATL for men and women >45 in either year for mercury, while concentrations in yellowfin croaker increased in 2018 to the 5 servings per week ATL range for men and women >45 in 2018.

Fish tissue data for North San Diego Bay were analyzed for Pacific chub mackerel, barred sand bass and spotted sand bass (Figure 3-31). Pacific chub mackerel showed an increase in total PCB concentrations for both unnormalized and lipid-normalized data between 2009 and 2018, transitioning from within the 2 servings per week ATL range to the 1 serving per week ATL range. Both barred sand bass and spotted sand bass had increased average total PCB concentrations from 2009 to 2013 that exceeded do not consume ATLs, but both species had lower average PCB concentrations in 2018 that fell within the 2 servings per week ATL range. The elevated

concentrations in 2013 could be the result of analyzing whole fish compared to skin off filets in 2009 and 2018. Concentrations of mercury were similar among all monitored years for a given species with lowest concentrations consistently in Pacific chub mackerel and greatest concentrations in spotted sand bass. Concentrations for all three species were greater than various ATL thresholds, but none were greater than the “do not consume” concentrations.

Fish tissue data for South San Diego Bay were analyzed for slough anchovy, spotted sand bass and round stingray (Figure 3-32). Average total PCB concentrations in slough anchovy have exceeded “do not consume” ATLs in 2013 and 2018, while spotted sand bass and round stingray only exceeded do not consume ATLs in 2013 which may be a result of analyzing whole fish compared to skin off filets. Lipid-normalized PCB concentrations show a similar but more muted pattern, suggesting that these species in 2013 may have had higher lipid concentrations that could have contributed to the high tissue total PCB concentrations. Average mercury concentrations in slough anchovy increased from below the 7 servings per week ATL for women 18-45 and children in 2013 to the 3 servings per week ATL in 2018. Concentrations of mercury in spotted sand bass in 2009 were above the “do not consume” ATL for women 18-45 and children and within the 1 serving per week ATL range for men and women >45. These concentrations dropped below the “do not consume” threshold in both 2013 and 2018 but were still within various ATL servings per week ranges. Concentrations of mercury in round stingrays show an increase from 2013 to 2018 within various ATL consumption ranges but were below the “do not consume” thresholds. Round stingrays were not assessed in 2009.

While different tissue processing (whole fish in 2013 vs. skin off filets for sport fish and removal of head/tail/guts for small fish in 2009 and 2018) should be kept in mind when interpreting these comparisons, it does appear that there may have been a larger influence on total PCB concentrations compared total mercury measured in the fish tissue. This suggests that PCBs and mercury have different patterns of accumulation among the tissues in fish.

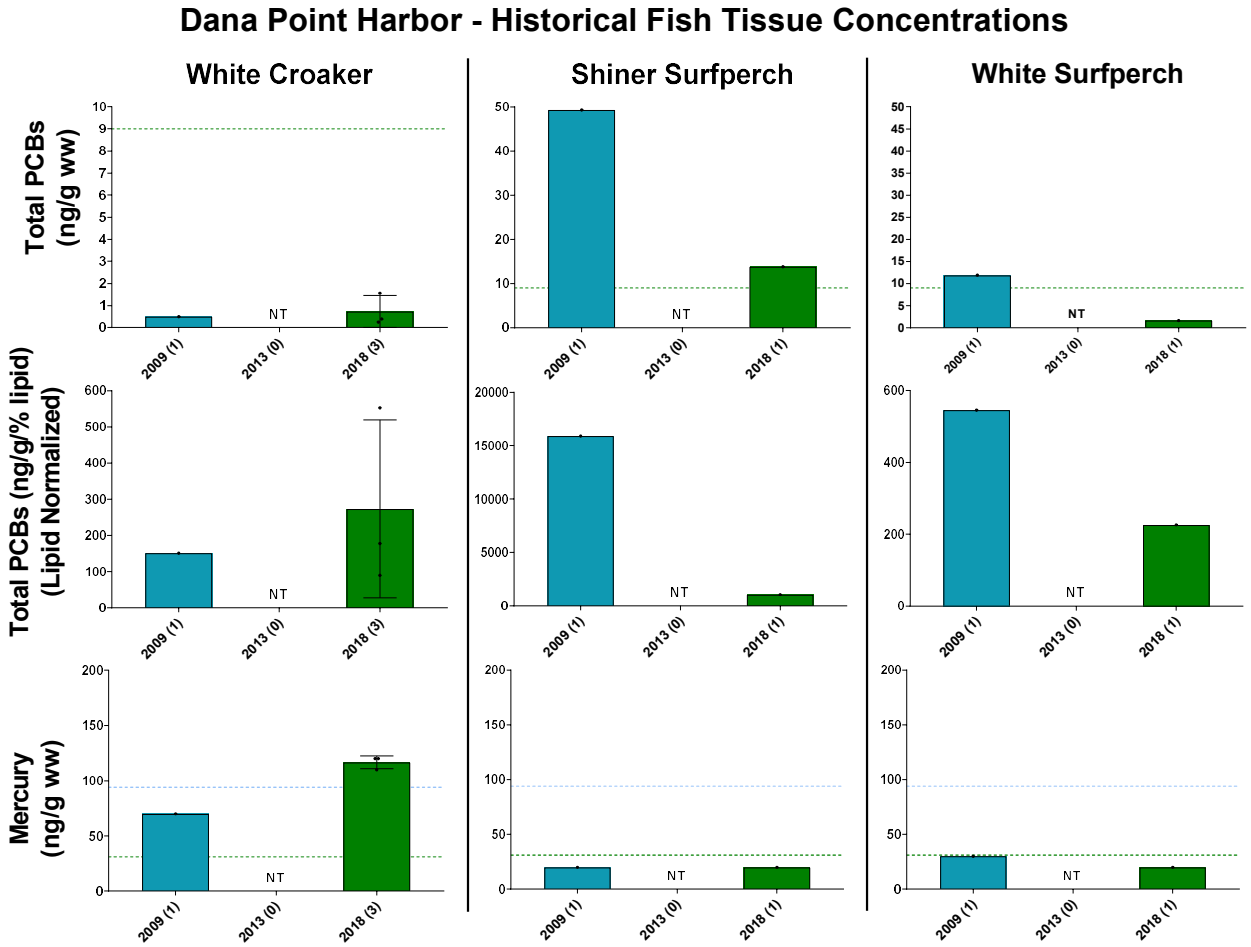


Figure 3-28. Historical Fish Tissue Concentrations of PCBs and Mercury in Dana Point Harbor

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower OEHHA ATLs of seven servings per week for PCBs (9 ng/g ww, in green) and for mercury (31 ng/g ww for women 18-45 and children 1-17, in green; and 94 ng/g ww for women >45 and men, in blue).The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. "NT" = Not Tested.

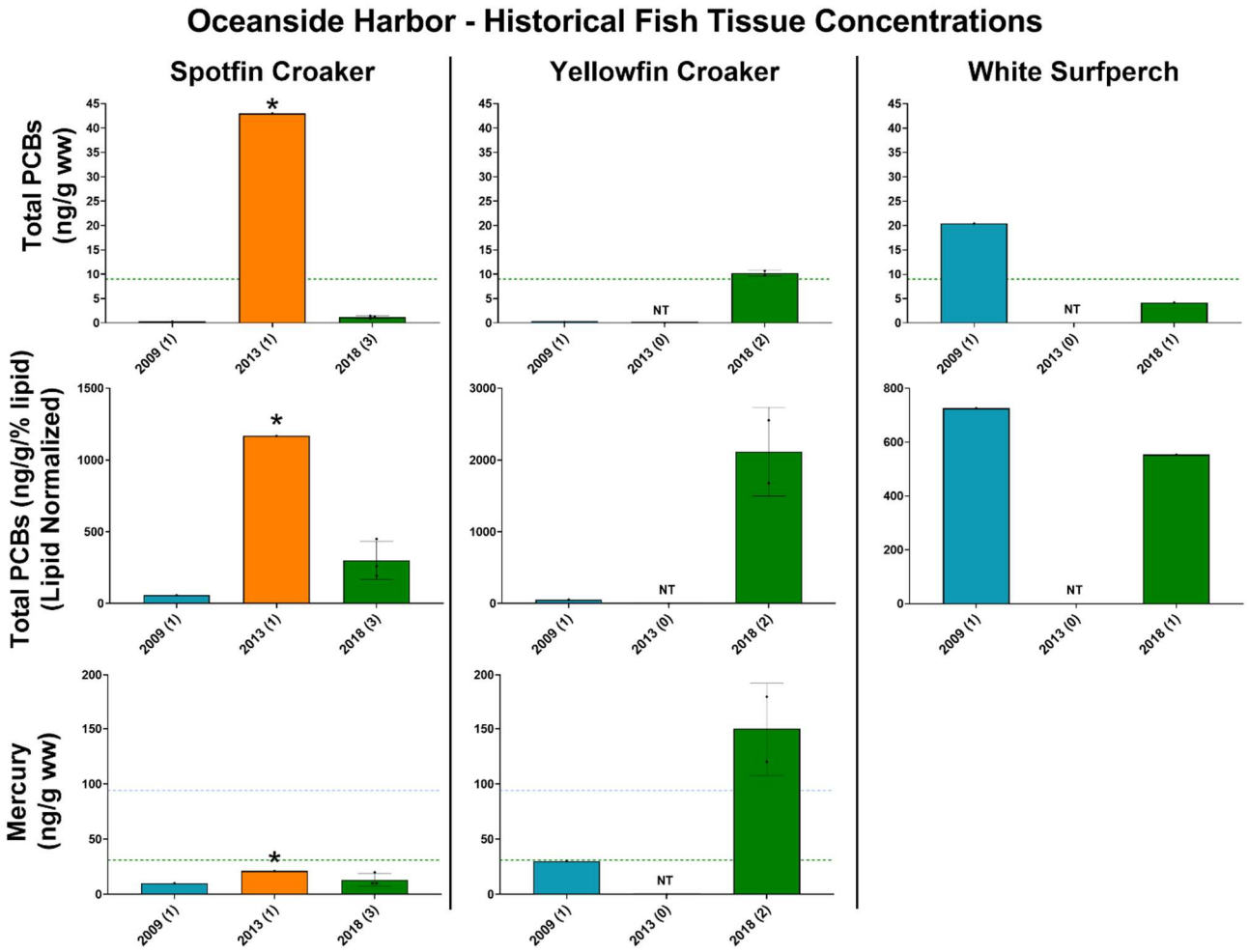


Figure 3-29. Historical Fish Tissue Concentrations of PCBs and Mercury in Oceanside Harbor

*Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower OEHHA ATLs of seven servings per week for PCBs (9 ng/g ww, in green) and for mercury (31 ng/g ww for women 18-45 and children 1-17, in green; and 94 ng/g ww for women >45 and men, in blue).The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. "NT" = Not Tested. ***** =* 2013 fish analyzed as whole fish compared to 2009 and 2018 which analyzed skin off filets.

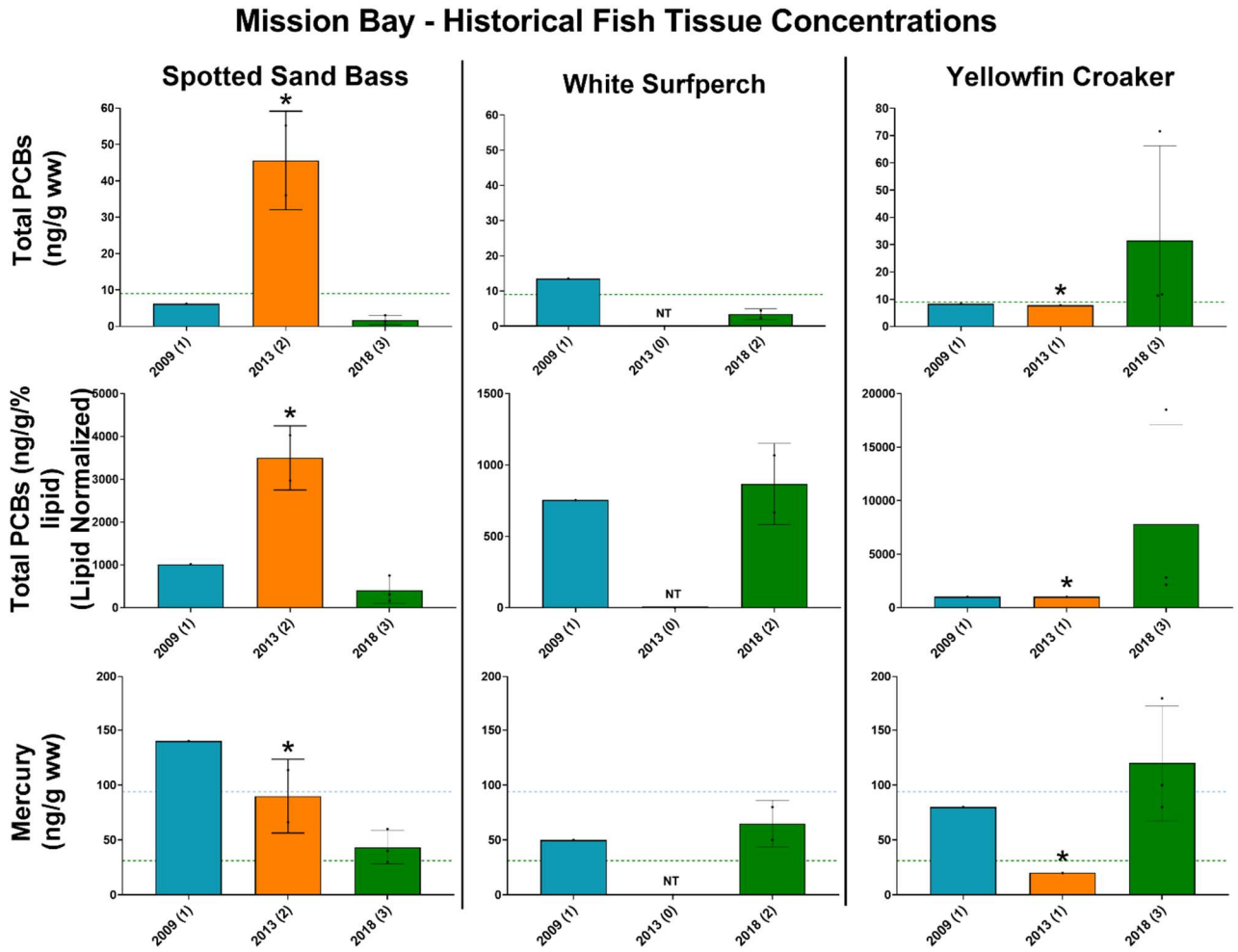


Figure 3-30. Historical Fish Tissue Concentrations of PCBs and Mercury in Mission Bay

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower OEHHA ATLs of seven servings per week for PCBs (9 ng/g ww, in green) and for mercury (31 ng/g ww for women 18-45 and children 1-17, in green; and 94 ng/g ww for women >45 and men, in blue).The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. "NT" = Not Tested. * = 2013 fish analyzed as whole fish compared to 2009 and 2018 which analyzed skin off filets.

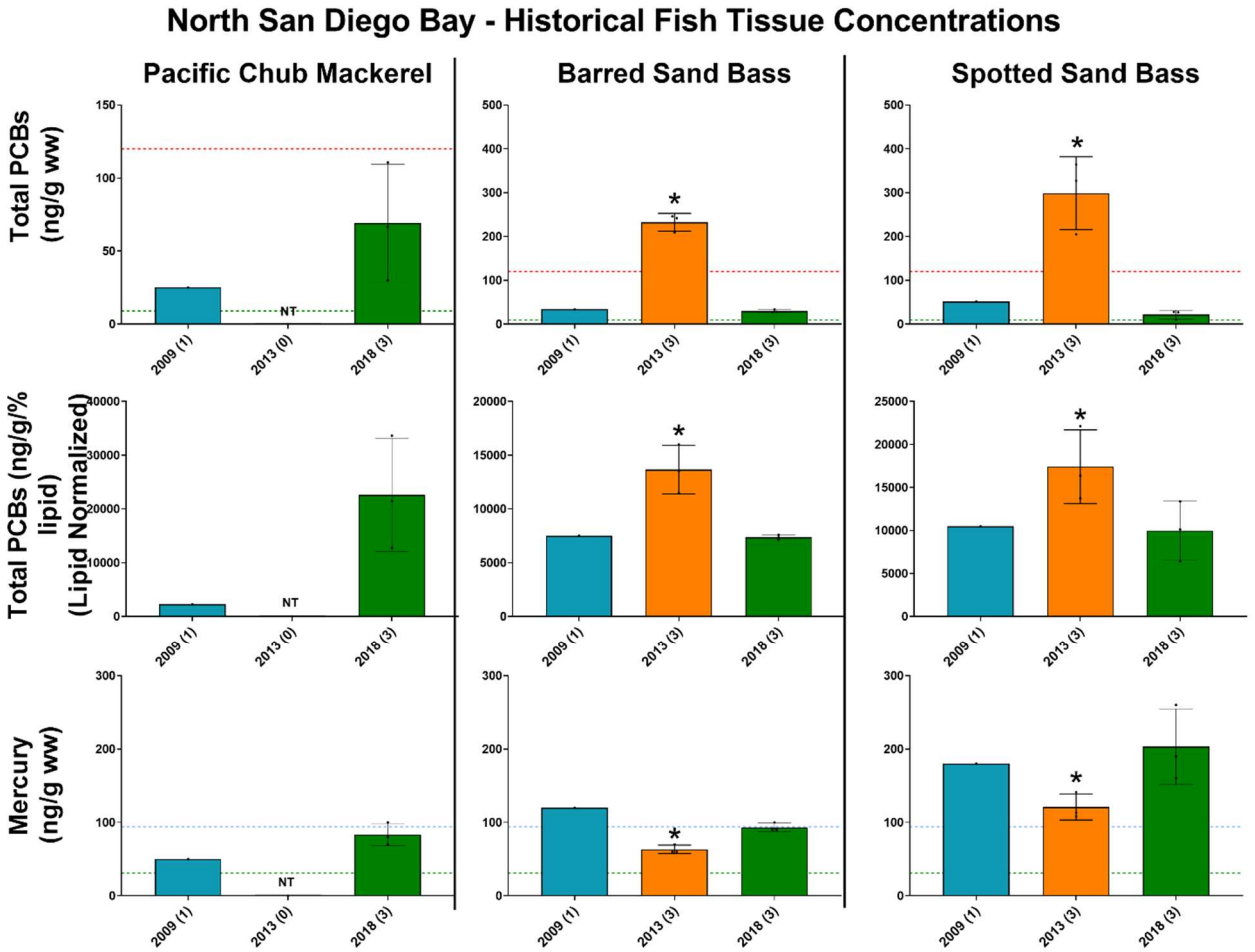


Figure 3-31. Historical Fish Tissue Concentrations of PCBs and Mercury in North San Diego Bay

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower OEHHA ATLs of seven servings per week for PCBs (9 ng/g ww, in green) and for mercury (31 ng/g ww for women 18-45 and children 1-17, in green; and 94 ng/g ww for women >45 and men, in blue), as well as the "do not consume" ATL for PCBs (120 ng/g ww, in red). The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. "NT" = Not Tested. * = 2013 fish analyzed as whole fish compared to 2009 and 2018 which analyzed skin off filets.

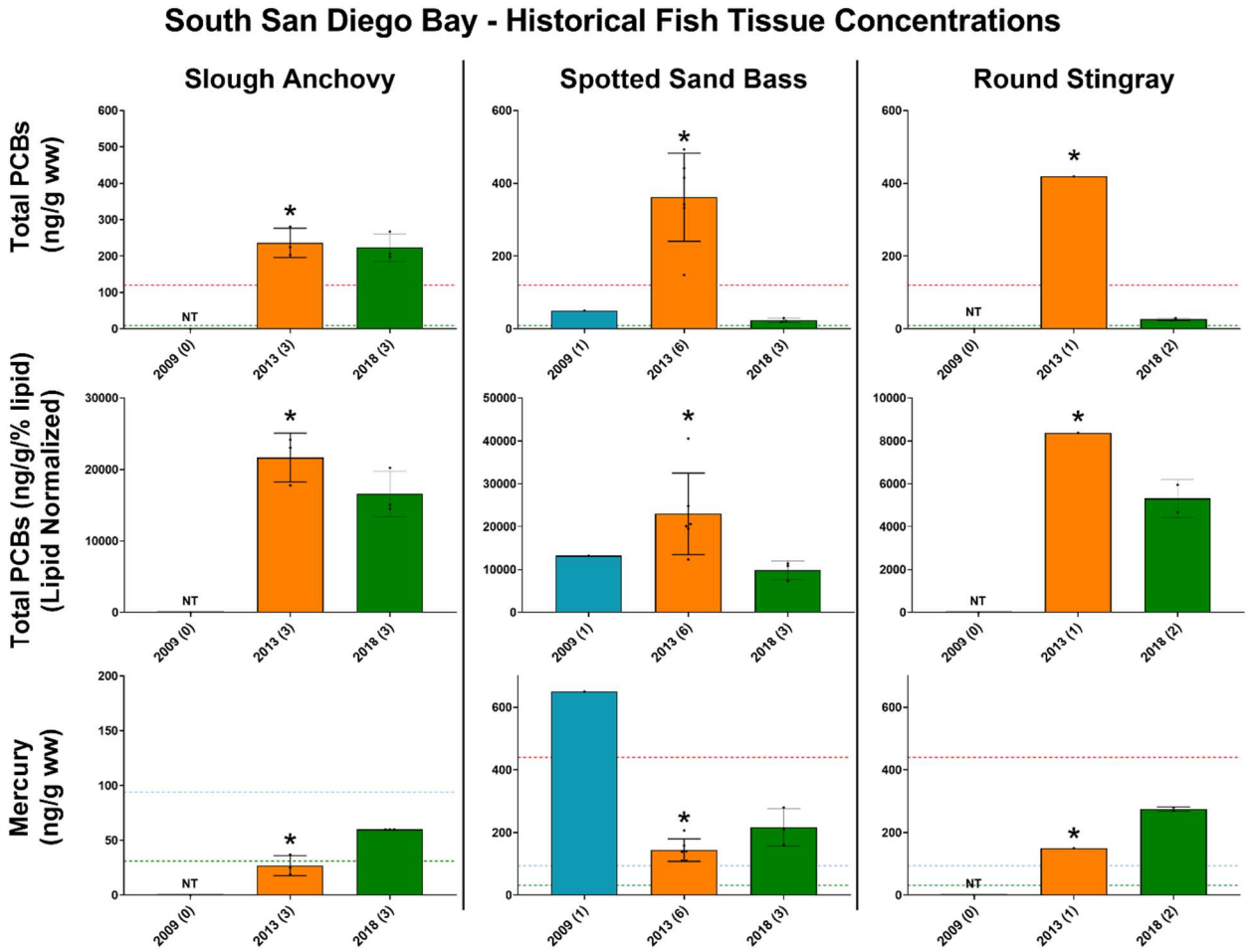


Figure 3-32. Historical Fish Tissue Concentrations of PCBs and Mercury in South San Diego Bay

Note: Bars represent averages, dots represent individual values, whiskers represent ±1 standard deviation. The dotted lines represent the lower OEHHA ATLs of seven servings per week for PCBs (9 ng/g ww, in green) and for mercury (31 ng/g ww for women 18-45 and children 1-17, in green; and 94 ng/g ww for women >45 and men, in blue), as well as the "do not consume" ATL for PCBs (120 ng/g ww, in red) and mercury (440 ng/g ww for women 18-45 and children 1-17). The number of samples represented by each bar is indicated in the parentheses after each site name on the x-axis. "NT" = Not Tested. * = 2013 fish analyzed as whole fish compared to 2009 and 2018 which analyzed skin off filets.

This page intentionally left blank

3.8 Data Quality Assurance/Quality Control

3.8.1 Field Activities

All field-related activities met the QA/QC requirements in the project-specific Quality Assurance Project Plan (Wood, 2018a) and the regional Bight monitoring methods provided in the Bight '18 QA Manual (SCCWRP, 2018a) and discussed in Section 2.3. QA/QC requirements included calibration and collection of data from the CTD and portable field meters used to measure field water quality parameters, field sample documentation, electronic capture of data, vessel positioning and collection of sediment samples all within a 100-meter radius of the target locations (with the exception of Stations B18-10179, B18-10015, and B18-10043), and all trawl-related activities.

3.8.2 Analytical Chemistry

A complete QA/QC review of sediment data collected during the RHMP, including a 100% Level II and 10% Level IV third-party review by Laboratory Data Consultants, Inc. (LDC), is discussed in detail in the 2018 RHMP Core Monitoring Report (Wood, 2020). A 100% Level II and 10% Level IV QA/QC review of tissue data collected during the RHMP in 2018 is discussed in this section. All chemistry results were deemed usable, unless otherwise noted in the following QA/QC summary.

3.8.2.1 *Introduction and Background – Data Review and Validation Summary*

As part of the 2018 RHMP effort, 76[8] tissue samples were collected and analyzed. Tissue composites were created by BOG personnel at Moss Landing Marine Laboratories and chemical analyses of all tissue samples were conducted by Physis in Anaheim, California.

Samples were collected in accordance with the approved RHMP project-specific QAPP documents (Wood, 2018a). Samples were analyzed as described in Section 2.2 and the resultant data reviewed against data quality objectives (DQOs) in the project QAPP and Bight QA Manual (Wood, 2018a; SCCWRP, 2018a). Project DQOs were developed on the basis of SWAMP criteria consistent with the previous 2008 RHMP study (Weston, 2008 and 2010), and related regional monitoring efforts, including the Bight '18 regional monitoring program managed by SCCWRP. Two field duplicates were submitted as part of this dataset. The duplicate precision DQO for this data set is fulfilled using analytical duplicates (including replicate samples, laboratory control samples [LCS]/laboratory control sample duplicates [LCSDs], matrix spike [MS]/matrix spike duplicates [MSDs]).

3.8.2.2 *Test Methods*

Physis analyzed the tissue samples for selenium by USEPA 6020, mercury by USEPA 245.7, chlorinated pesticides, PAHs, and PCB congeners by USEPA 8270D, PBDEs by EPA 8270D-NCI, percent lipids by gravimetric, and percent solids by SM 2540B. Arsenic was measured by the Moss Landing Marine Laboratories following USEPA 6020.

[8] Includes two replicate samples.

3.8.2.3 *Data Validation Methodology*

Results for these samples underwent a full Level II data validation by LDC consistent with USEPA Region 9 protocols to evaluate the usability of the data. The Level II validation includes review of the QC results in the laboratory's analytical report and reported on QC summary forms relative to project DQOs. Furthermore, one SDG for tissues was submitted to LDC for a full Level IV validation equating to 10% of the total number of samples analyzed. Level IV review includes all Level II validation parameters plus validation of initial and continuing calibration verification, tuning and performance checks, surrogate recoveries, and corresponding QA/QC samples. Physis supplied Level IV data deliverables for SDG 1807003-021 for tissues[9], subjected to full Level IV validation. This electronic data deliverable (EDD) is included in Appendix I on a CD. This data validation has been performed in general accordance with the following protocols:

- Wood 2018a. Quality Assurance Project Plan: 2018 Regional Harbor Monitoring Program. June 2018.
- SCCWRP, 2018a. Quality Assurance (QA) Manual, Southern California Bight 2018 Regional Marine Monitoring Survey (Bight '18). June 2018.
- USEPA, 2017a. National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-540-R-2017-001. January 2017.
- USEPA, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-2017-002. January 2017.
- USEPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007; update V, July 2014.

3.8.2.4 *Data Quality Objectives*

DQOs were consistent with the RHMP project specific QAPP (Wood, 2018a) and summarized in Tables 6-2 and 6-3 of the Bight QA Manual (SCCWRP, 2018a). These include criteria for Precision, Accuracy, Completeness, Comparability, and Representativeness (PARCC) and for overall usability. Accuracy was based on acceptance of laboratory-derived, performance-based control limits (±3 standard deviations). Precision limits for laboratory duplicates and MS/MSD pairs were 25% for tissues. A default completeness goal of 90% was used, citing no corresponding SWAMP requirement. Because a full Level II data validation was performed on all samples and a Level IV data validation on 10% of the data, this summary aims to highlight the overall results of both validations and the data usability and is not a comprehensive review of all data qualifications. To ensure data comparability, these samples were analyzed using USEPA-approved laboratory methods by an Environmental Laboratory Accreditation Program (ELAP) accredited laboratory (Physis). The laboratory also has passed inter-laboratory method calibration studies for the most recent Bight program. Representativeness was ensured by selecting and

[9] Physis supplied a Level IV data deliverable for SDG 1807003-008 for sediments. See Wood, 2020.

testing of a broad range of tissue matrices of common species types, as determined by input from the bioaccumulation technical work group.

3.8.2.5 *Data Usability*

The project default completeness DQO for data usability was 90% of any constituent.

Rejected Data

A rejected ("r-flagged") result is typically due to a significant nonconformance, and the affected data are rendered as unusable. The Level II and Level IV validations performed by LDC indicated no r-qualified results for either sediment or tissues were warranted for all data reported herein. Based on these criteria, the data were considered 100% usable.

Estimated Data

Both the Level II and Level IV validation identified a small number of method protocol exceptions that warranted an estimated ("J-flagged") validation qualifier. Affected data were assigned either a "J" as estimated but quantifiable or "UJ" validation code if the constituent was below the MDL (non-detects). A summary of flagged data by DQO is provided below. There were no significant trends or specific compounds with systemic bias. A detailed description of the affected constituents, flags, and reason and explanation codes is provided in Appendix I.

3.8.2.6 *Precision*

All data for tissues met DQOs for duplicate precision (e.g., RPD), with the following exceptions:

- 0.1% of chlorinated pesticide data were flagged as estimated for analytical precision.
- 0.5% of PBDE data were flagged as estimated for analytical precision.
- 0.4% of PCB congener data were flagged as estimated for analytical precision.

3.8.2.7 *Accuracy*

All data for tissues met DQOs for spike recovery (e.g., ICV, CCV, LCS, CRM) with the following exceptions:

- 11.8% of chlorinated pesticide data were flagged as estimated for analytical accuracy.
- 7.1% of PAH data were flagged as estimated for analytical accuracy.
- 12.2% of PBDE data were flagged as estimated for analytical accuracy.
- 4.6% of PCB congener data were flagged as estimated for analytical accuracy.

3.8.2.8 *Overall Data Quality*

With minor exceptions, the data quality for tissues was well above DQO guidelines. All data were considered usable, with a 100% completeness goal for this objective. A limited number of results were flagged as estimated "J-flagged" or "UJ-flagged" (estimated, non-detect) with few if any systematic potential bias. Data implications are provided in Appendix I.

This page intentionally left blank

4.0 CONCLUSIONS AND RECOMMENDATIONS

A summary of spatial and temporal fish tissue COPC concentrations, how tissue concentrations relate to sediment COPC concentrations, and individual COPC human/ecological risk is summarized below. As data gaps continue to be evaluated with ongoing stakeholder efforts and refined through scientific peer review, conclusions and recommendations in this report should be revisited to guide future studies.

The 2018 RHMP bioaccumulation investigation was unique compared to the 2013 RHMP investigation, in part due to the coordination with the statewide SWAMP BOG effort to assess sportfish bioaccumulation for human consumption. Two primary changes occurred in 2018 from 2013 as described previously in the report:

1. Skin-off filets were measured for larger fish species in 2018 as opposed to whole body for all fish in 2013. This likely inflated concentrations of some of the organic COPCs in fish recorded in 2013 (in particular, PCBs and DDTs due to their hydrophobicity and increased concentrations typically found in the fatty no-muscle tissues). The 2013 efforts largely focused on ecological health thresholds, hence the measurement of whole-body fish.

2. The 2018 program follows a recommendation from the 2013 report to incorporate a range of sediment concentration values over larger regions to assess the sediment quality linkage with tissue chemistry rather than pairing tissues and sediments from single stations. This area composite approach for tissues follows the BOG protocols and aligns with other studies within San Diego Bay (Bay et al., 2016). Pairing tissue collections over a larger region (rather than individual stations) with an area composite approach for sediment chemistry better aligns with the assumption that fish are mobile and depending on species, age, behavior, and season, the home range for a given individual may vary and expose that animal to a gradient of different sediment conditions.

4.1 Bioaccumulation Patterns for COPCs

Tissue chemistry results for fish collected during the 2018 RHMP had similar spatial patterns for total PCBs, total chlordanes, arsenic, mercury, and selenium as that measured in 2013 with higher mean concentrations generally observed in San Diego Bay and Mission Bay compared to Dana Point and Oceanside Harbors. Exceptions to this were total DDTs and total PBDEs, which did not have significant differences across regions. Dieldrin and PAHs were not detected in any tissues in 2018.

Fish species were separated into feeding guilds as a means to consider trophic position and diet as factors in bioaccumulation potential with several patterns emerging from this analysis:

- Forage fish (anchovies and Pacific chub mackerel) had higher mean concentrations of organic COPCs compared to predator fishes. This was especially true for total chlordanes, total DDTs, total PBDEs, and total PCBs. This is an interesting observation consistent with results in 2013, as these forage fish species are often less directly associated with the sediments than many of the others assessed in this study, and conventional assumptions

for bioaccumulation models generally assume concentrations increase with increasing trophic levels. This finding also supports that there are multiple routes of exposure to consider, particularly respiration and accidental ingestion of particulate-associated for forage fish which is consistent with their method of acquiring prey (plankton) primarily by filter feeding (Bay and Parks 2020).

- Elasmobranchs (sharks and rays) were an exception to the above pattern, as they were consistently observed to have higher concentrations of organic COPCs (in certain cases higher than forage species) and metals, although the number of replicates for sharks was low (n=3 across 2 species). The elevated bioaccumulation in these species is not entirely unexpected, as sharks are often higher trophic-level predators that are long lived, with leopard sharks known to live 10+ years and brown smooth-hound sharks known to live 20+ years (Love, 2011). They also have demonstrably larger home ranges and seasonally will alter their movement patterns and/or migrate outside of embayments in the winter (Campos et al. 2009, Carlisle and Starr 2009, Espinosa et al. 2011, Vaudo and Lowe 2006), potentially exposing them to areas that are not characterized as part of this assessment.
- Fish species known to only prey on invertebrates (primarily surfperches) had consistently lower mean tissue concentrations of COPCs compared to other guilds.

In general, the spatial patterns in tissues were similar to that observed for average sediment concentrations across regions. The greatest bioaccumulation potential from sediments was observed for total PCBs and total DDTs, where mean tissue concentrations exceeded the mean associated sediment concentrations more than 5x in a majority of fish tissues among all regions. Bioaccumulation above associated mean sediment concentrations was evident for mercury and selenium in some regions for some species, but a majority of these fish had BSAF values less than 1.0 for these two chemicals indicating limited bioaccumulation overall compared to sediment concentrations. Very few fish tissue samples had BSAF values greater than 1.0 for PBDEs and arsenic comprising only a few of the predatory species, also indicating limited bioaccumulation potential overall for these two compounds.

Among the different regions, BSAFs for organic COPCs were generally higher in Dana Point, Oceanside and Mission Bay compared to San Diego Bay, which is in part due to the higher %TOC and lower sediment concentrations for many of the organic COPCs in the smaller harbors. As BSAFs are a relatively simple model, this could also be a result of other factors not captured in the calculation. It is possible that many of the fish captured during this study may have a home range that extends beyond the designated areas used to average sediment concentrations, possibly even between the different harbors, particularly the more mobile species such as the sharks which also tended to have higher tissue concentrations. It also presents the possibility that there are other routes of exposure in these harbors that contribute to the increased tissue concentrations in addition to sediment concentrations. Bioaccumulation patterns based on BSAF values within the different fish guilds were as follows:

- Forage fish: Pacific chub mackerel had higher BSAFs for total DDTs, total PBDEs and total mercury compared to both anchovy species, while all forage species had similar BSAFs for all other COPCs.

- Predators – Invertebrates: Salema had elevated BSAFs compared to other species for total DDTs, total PBDEs, total PCBs and total mercury. For other COPCs, most species had similar BSAFs with the exception of total chlordanes, where spotfin croaker had the highest BSAFs.
- Predators – Mesocarnivores: While there is some variability between COPCs, in general the species with the highest BSAFs are the elasmobranchs (round stingrays were especially high for arsenic and selenium), yellowfin croaker, and California corbina. Barred and spotted sand bass also had elevated BSAFs for total chlordanes, total DDTs, and total PCBs.

Historical comparisons of fish tissue concentrations for total PCBs and total mercury were performed on a region-by-region basis due to the different fish communities present in each embayment and the varying continuity of fish species analyzed across multiple years to allow for historical comparisons. Since different tissue preparation methods were used in 2009 and 2018 compared to 2013, this is not a robust statistical trend analysis but rather a way to contextualize and compare results from historical studies in the RHMP embayments. The results can be summarized as follows:

- Dana Point Harbor: Total PCBs appear to have decreased in 2018 compared to 2009 for shiner surfperch and white surfperch. The opposite pattern was noted for white croaker although variability was elevated in 2018 for this species. Mercury concentrations in shiner surfperch and white surfperch have remained below the most conservative ATLs for women 18-45 and children, while concentrations in white croaker in 2018 were higher than 2009 and were greater than the conservative ATLs for men and women >45.
- Oceanside Harbor: Total PCBs showed an inconsistent pattern among species, although two of the three species exhibited decreased tissue concentrations in 2018 to values below the most conservative ATLs compared to previous surveys. Mercury concentrations were consistently low in spotfin croaker, while yellowfin croaker had a marked increase in 2018 compared to 2009.
- Mission Bay: Total PCBs showed an inconsistent pattern among species, with spotted sand bass and white surfperch having lower tissue concentrations in 2018 compared to previous surveys, while mean total PCBs in yellowfin croaker increased threefold and exceeded the most conservative ATL thresholds for the first time in 2018. Mercury concentrations showed a decreasing pattern in spotted sand bass, although not below the most conservative ATL for women 18-45 and children. Mercury concentrations in white surfperch and yellowfin croaker were greater in 2018 than that measured in previous surveys, with yellowfin croaker exceeding the most conservative ATLs for men and women >45.
- North San Diego Bay: All species analyzed have exceeded the most restrictive ATLs for total PCBs for all survey years, although 2013 was the only year that sand bass exceeded the “do not consume threshold” which may be a result of the methodological differences in analyzing whole fish in 2013 compared to skin-off filets in other years. Mercury concentrations in 2018 increased in Pacific chub mackerel compared to 2009 and sand bass had increased mean concentrations of mercury compared to 2013, although the

2018 concentrations are similar to what was observed in 2009. Only spotted sand bass have consistently exceeded the most conservative ATL for men and women >45.

- South San Diego: Slough anchovy have consistently exceeded the "do not consume" ATL for total PCBs, while spotted sand bass and round stingrays only have exceeded the same threshold in 2018. Lipid-normalized data suggests that spotted sand bass and round rays may have had more lipid content in 2013, as lipid-normalized concentrations were more similar across years, although this is also potentially influenced by the difference in analysis of whole fish compared to skin-off filets. Total mercury concentrations in slough anchovy increased above the most conservative ATL for women 18-45 and children in 2018 compared to 2013. Spotted sand bass and round stingrays both had higher total mercury in 2018 compared to 2013, although spotted sand bass have decreased from 2009 when they exceeded the "do not consume" ATL for women 18-45 and children.

The relatively few composite samples from the same fish species collected from the same locations, along with the availability of only 2 to 3 measurements over the past 10 years limits the power for robust trend analysis at this time. This is the first time a historical evaluation has been conducted for tissue for the RHMP with data that now span more than two sampling periods. Continued analysis with consistent methods over time will enhance the power to assess trends in the future. Including analysis of all 209 PCB congeners would also help to improve confidence in total PCB trends in the future.

4.2 Screening Level Risk Assessment

A comparison of measured tissue concentrations in fish with available human health criteria and regulatory-based wildlife tissue residue effects threshold values provided a means to evaluate comparative risk for those bioaccumulative COPCs measured. A summary of human health screening exceedances (OEHHA Advisory Tissue Levels [ATLs] and Fish Contaminant Goals [FCGs] where applicable) for each of the COPCs is presented in Table 4-1. Exceedances of wildlife tissue residue effects thresholds are discussed for each COPC below. Note again that these values are guidelines only and this report should not be used, nor was designed, to provide a formal human health risk assessment. Please consult OEHHA directly for specific guidance related to human health risk related to the consumption of sportfish: https://oehha.ca.gov/fish/advisories.

Table 4-1. Summary of Human Health Screening Level Exceedances

COPC	Screening Level Source	Screening Level Description	Screening Level (ng/g ww)	Number of Screening Level Exceedances					
				Dana Point Harbor	Oceanside Harbor	Mission Bay	North SD Bay	South SD Bay	All Harbors
			Number of Samples (n)	*9*	*14*	*14*	*23*	*14*	*74*
Total Chlordanes[1]	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption	560	0	0	0	0	0	0
	OEHHA Fish Contaminant Goal (FCG)	8 oz per week (32 g/day) over a lifetime	5.6	0	0	0	0	0	0
Total DDTs[2]	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption	2,100	0	0	0	0	0	0
	OEHHA Fish Contaminant Goal (FCG)	8 oz per week (32 g/day) over a lifetime	21	0	**1**	0	0	0	**1**
Total Dieldrin	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption	46	0	0	0	0	0	0
	OEHHA Fish Contaminant Goal (FCG)	8 oz per week (32 g/day) over a lifetime	0.46	0	0	0	0	0	0
Total PAHs[3]	No applicable OEHHA screening levels			NA	NA	NA	NA	NA	NA
Total PBDEs[4]	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption	630	0	0	0	0	0	0
Total PCBs[5]	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption	120	0	0	0	**3**	**5**	**8**
	OEHHA Fish Contaminant Goal (FCG)	8 oz per week (32 g/day) over a lifetime	3.6	**4**	**11**	**9**	**23**	**14**	**61**
Arsenic	No applicable OEHHA screening levels			NA	NA	NA	NA	NA	NA
Mercury	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption (Women aged >45 years and men)	1,310	0	0	0	**1**	0	**1**
		No consumption (Women aged 18-45 years and children aged 1-17 years)	440	0	0	**1**	**1**	**2**	**4**
	OEHHA Fish Contaminant Goal (FCG)	8 oz per week (32 g/day) over a lifetime	220	0	0	**2**	**4**	**5**	**11**
Selenium	OEHHA Fish Consumption Advisory Tissue Level (ATL)	No consumption	15,000	0	0	0	0	0	0
	OEHHA Fish Contaminant Goal (FCG)	8 oz per week (32 g/day) over a lifetime	7,400	0	0	0	0	0	0

Notes:

COPC = contaminant or chemical of potential concern; g/day = gram(s) per day; OEHHA = Office of Environmental Health Hazard Assessment; oz = ounce(s); NA = not applicable; ng/g ww = nanogram(s) per gram wet weight; DDT= Dichlorodiphenyltrichloroethane; PAH = polycyclic aromatic hydrocarbon; PBDE = polybrominated diphenyl ether; PCB = polychlorinated biphenyl; SD = San Diego

Bold indicates 1 or more screening level exceedances.

1 = Total Chlordanes includes the sum of alpha-chlordane, gamma-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane.

2 = Total detectable DDTs includes the sum of 2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, 2,4'-DDT, and 4,4'-DDT.

3 = Total PAHs includes the sum of acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnaphthalene, 2-methylnaphthalene, 1-methylphenanthrene, and 1,6,7-trimethylnaphthalene.

4 = Total PBDEs includes the sum PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, and 209.

5 = Total PCBs includes the sum of congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 174, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209.

This page left intentionally blank

PCBs

This assessment found total PCBs in fish tissue to be a primary COPC for human health risk based on prevalence in tissues across harbors and magnitude of concentrations exceeding guideline values. A total of 69% of the 74 tissue samples analyzed had a concentration above the most conservative human health 7 servings per week ATL, compared to only a small portion of samples exceeding thresholds for wildlife risk. This is largely due to the more conservative screening levels established for human health risk, the most stringent of which can be an order of magnitude lower than levels for wildlife. Tissue concentrations of total PCBs in 89.2% of samples were acceptable for 1-7 servings per week according to OEHHA guidance. Only northern and slough anchovy samples exceeded the "do not consume" OEHHA threshold of 120 ng/g ww, although it should be noted that for these species the entire organism was analyzed, whereas nearly all other species were analyzed as fillets. Tissue concentrations in 82.4% samples were greater than the OEHHA FCG of 3.6 ng/g ww and the Oregon DEQ ATL for human consumption of 4.7 ng/g ww.

With regard to wildlife risk, concentrations of total PCBs in fish tissue samples were generally below screening levels. All anchovy samples in addition to a single composite sample of shiner surfperch exceeded the lowest USFWS NOEC values for birds consuming invertebrates or fish of 110 ng/g ww (Zeeman, 2016). Mean concentrations for a majority of samples were above the SFRWQCB TMDL for PCBs in San Diego Bay. However, tissue concentrations from all samples were well below the lowest Oregon DEQ ATL for applicable wildlife, and the Oregon DEQ CTL.

Mercury

Of the bioaccumulative COPCs in the four San Diego Regional Harbors, mercury is considered to be second to PCBs with regard to both human and ecological risk. Of the 74 tissue samples analyzed, 81%had concentrations of mercury that exceeded the most restrictive ATL of 7 servings per week for women 18-45 and children, while 45% exceeded the 7 serving per week ATL for men and women >45.

A majority of tissue samples had concentrations of total mercury suitable for human consumption of 1-7 servings per week. Of the samples with total mercury concentrations above the no consumption OEHHA ATLs (for both women 18-45, children 1-17 and women >45, men), all were measured in sharks, with the exception of one composite sample from black croaker.

Concentrations of total mercury in fish tissue exceeded the most conservative screening levels for wildlife, listed by the USFWS for contaminants in tissue of aquatic biota in San Diego Bay. Many of the reported concentrations were also above the lowest Oregon DEQ for applicable wildlife and several were above the Oregon CTL in fish, shellfish, or other saltwater aquatic organisms, respectively.

DDTs

All fish tissue composite samples were well below total DDT screening criteria for protection of human health. Additionally, all samples were below the OEHHA FCG of 21 ng/g ww and the Oregon DEQ ATL for humans (27 ng/g ww) with the exception of one shiner surfperch composite

sample collected from Oceanside Harbor. With the exception of this sample, tissue concentrations of total DDT for all samples also were reported below screening criteria for wildlife risk. These include USFWS NOEC values for avian piscivores, including the California Least Tern and Caspian Tern (Zeeman, 2016).

Based on these collective observations, overall risk to both aquatic species and humans from DDTs is considered minimal across all four RHMP embayments.

Selenium

Concentrations of selenium in tissue samples from all fish species in all harbors were below all available criteria for protection of human health. All samples had concentrations of total selenium less than the most conservative OEHHA ATL of 1.0 µg/g ww.

All samples exceeded the lowest ATL for applicable wildlife established by the Oregon DEQ of 0.036 µg/g ww for mammals, and many exceeded the 0.23 µg/g ww for individual birds. Applicability of selenium ATL and CTL values derived by the Oregon DEQ to species found in the San Diego region is uncertain at this time without further investigation.

Total Chlordanes

Concentrations of total chlordanes in tissue samples from all fish species analyzed for the 2018 RHMP were well below all available criteria for protection of human health. The reported concentrations were also below the Oregon DEQ ATLs for applicable wildlife, the Oregon DEQ CTL, and NOEC and LOEC prey item threshold values for the protection of bird species summarized by U.S. Fish and Wildlife (Zeeman, 2016).

Based on these collective observations, overall risk to both aquatic species and humans from total chlordanes is considered minimal across all four RHMP embayments.

Total PBDEs

Concentrations of total PBDEs in fish tissues were well below all available criteria for protection of human health. The reported concentrations were also below the USFWS lowest NOEC values for the protection of birds.

Arsenic

At present, there are no set risk assessment thresholds for total arsenic in fish tissue, as the majority of arsenic (90-99%) in seafood is in the organic form, while the inorganic form is classified as a known carcinogen (USEPA Group A; EFSA, 2009). Further research and targeted analytical methods to measure inorganic arsenic in tissues is required for a risk assessment for arsenic.

PAHs

Concentrations of total PAHs in all tissue samples collected for the 2018 RHMP were below the MDL of 1.0 ng/g ww.

Dieldrin

Concentrations of dieldrin in all tissue samples were below the MDL of 0.1 ng/g ww. This concentration is well below any available documented concentrations of concern for both ecological and human health risk.

4.3 Recommendations

- Future studies should analyze all 209 PCB congeners to have greater confidence in the total PCBs measured in both sediments and tissues.
- The approach to create composite area averages for fish and sediment tissues was successful in providing general relationships between tissue and sediment concentrations of COPCs in RHMP embayments. Further analysis of spatial variability, fish forage ranges, and refinement of other modeling assumptions may improve predictive sediment-biota linkages, which may include measurement of dissolved COPCs and particulate-associated COPCs in the water column and porewater as passive modes of bioaccumulation in fish tissues.
- Separating fish by feeding guilds appears to be a successful approach to partition variance in bioaccumulation patterns based on trophic position and diet. Further refinement of the feeding guilds may lead to better understanding to the strength of this factor and why certain guilds may accumulate specific COPCs over others.
- Arsenic requires further research and guidance from a risk assessment perspective as some species, particularly elasmobranchs, were found to accumulate relatively high concentrations of the total form of arsenic, although the fraction of the more toxic inorganic form is unknown for comparison to available risk guideline values. Future efforts may consider measuring and reporting the inorganic form of arsenic in tissues.
- For better confidence in historical comparisons, species that are common within each embayment should be targeted consistently with the goal of multiple composites containing multiple individuals.
- A closer examination of sources of bioaccumulative contaminants to RHMP embayments as the contaminants may also have other sources besides sediments, such as on or near water activities, aerial deposition, runoff, and groundwater influx.
- Complete a literature and database search of up-to-date tissue residue effects data relevant to species found in and around the San Diego region. Re-evaluate ecological risk of identified COPCs based on any new values obtained.

5.0 REFERENCES CITED

Allen, J.M., P.V. Velez, D.W. Diehl, S.E. McFadden, M. Kelsh. 1996. Demographic variability in seafood consumption rates among recreational anglers of Santa Monica Bay, California, in 1991-1992. Fishery Bulletin 94:597-610.

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler). 2016. Final Regional Harbor Monitoring Program 2013 Report. Prepared for the Unified Port of San Diego, City of San Diego, County of Orange, and City of Oceanside. January 2016.

Amec Foster Wheeler. 2017a. Aquatic Food Web Bioaccumulation Study of San Diego Bay Final Technical Report. Prepared for the City of San Diego. October, 2017. 132pp.

Amec Foster Wheeler. 2017b. Regional Harbor Monitoring Program 2013; Aquatic Food Web Special Study Final Technical Report. Prepared for: Unified Port of San Diego, City of San Diego, City of Oceanside, and County of Orange. June 2017, 168 pp.

Bay, S.M. and A. Parks. 2020. Occurrence and Bioaccumulation of Dissolved Organochlorines in San Diego Bay, Final Report. Southern California Coastal Water Research Project. February 2020. 124pp.

Bay, S.M., Greenstein, D.J, Parks, A.N., Zeeman, C.Q.T. 2016. Assessment of Bioaccumulation in San Diego Bay. Final Project Report. December 2016 .

Beegan, C. and K. Faick, 2018. Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries of California. Sediment Quality Provisions. California Environmental Protection Agency (Cal EPA) and the State Water Resources Control Board (SWRCB). June 5, 2018. 72pp.

Bioaccumulation Oversight Group (BOG), 2018. Monitoring Plan for a Second Statewide Survey of Bioaccumulation on the California Coast. California Surface Water Ambient Monitoring Program.

Bond, A.B., Stephens, J.S., Pondella, D.J., Allen, M.J. and Helvey, M. 1999. A method for estimating marine habitat values based on fish guilds, with comparisons between sites in the Southern California Bight. Bulletin of Marine Science 64(2):219-242.

Cai, Y., Rooker, J.R., Gill, G.A. and Turner, J.P., 2007. Bioaccumulation of mercury in pelagic fishes from the northern Gulf of Mexico. *Canadian Journal of Fisheries and Aquatic Sciences*, *64*(3), pp.458-469.

California Water Quality Control Board. 2018. Staff report including substitute environmental documentation for amendments to the water quality control plan for enclosed bays and estuaries – part 1 sediment quality (sediment quality provisions). June 2018.

Campos, B.R., Fish, M.A., Jones, G., Riley, R.W., Allen, P.J., Klimley, P.A, Cech Jr, J.J., Kelly, J.T. 2009. Movements of brown smoothhounds, *Mustelus henlei*, in Tomales Bay, California. Environmental Biology of Fishes 85:3-13.

Canada, Linda A. 2006. “Sitting on the Dock of the Bay”; 100 Years of Photographs from the San Diego Historical Society. The Journal of San Diego History.

Carlisle, A.B. and Starr, R.M. 2009. Habitat use, residency, and seasonal distribution of female leopard shards *Triakis semifasciata* in Elkhorn Slough, California. Marine Ecology Progress Series 380:213-228.

City of San Diego (Prepared by URS Corporation). 2013. Watershed Asset Management Plan. Transportation and Storm Water Department; Storm Water Division. July 2013.

Davis, J.A., J.R.M. Ross, S.N. Bezalel, J.A. Hunt, A.R. Melwani, R.M. Allen, G. Ichikawa, A. Bonnema, W.A. Heim, D. Crane, S. Swenson, C. Lamerdin, M. Stephenson, and K. Schiff. 2010. Contaminants in Fish from the California Coast, 2009-2010: Summary Report on a Two-Year Screening Survey. A Report of the Surface Water Ambient Monitoring Program (SWAMP). California State Water Resources Control Board, Sacramento, CA.

Espinosa, M., Farrugia, T.J., Lowe, C.G. 2011. Habitat use, movements and site fidelity of the gray smooth-hound shark (*Mustelus californicus*) in a newly restored southern California estuary. Journal of Experimental Marine Biology and Ecology 401:63-74.

European Food Safety Authority (EFSA). 2009. Scientific opinion on arsenic in food. EFSA Journal, 7(10):1351.

Gassel, M. 1997. Chemicals in Fish Report No. 1: Consumption of Fish and Shellfish in California and the United States. Final Draft Report, Pesticide and Environmental Toxicology Section. Office of Environmental Health Hazard. California Environmental Protection Agency. Oakland, California.

Gassel, M. and R.K. Brodberg. 2005. General Protocol for Sport Fish Sampling and Analysis. California Environmental Protection Agency (USEPA) Pesticide and Environmental Toxicology Branch, Office of Environmental Health Hazard Assessment. December 2005. 11pp.

Hammerschmidt, C.R. and Fitzgerald, W.F., 2006. Bioaccumulation and trophic transfer of methylmercury in Long Island Sound. *Archives of Environmental Contamination and Toxicology*, *51*(3), pp.416-424.

Hebert C.E., and K.A. Keenleyside. 1995. To normalize or not to normalize? Fat is the question. Environmental Toxicology and Chemistry, 14: 801–807.

Hixon, M.A. 1981. An experimental analysis of territoriality in the California reef fish *Embiotoca jacksoni*. American Society of ichthyologists and Herpetologists 1981(3):653-665.

Hoffman, E. 2007. The Technical Basis for Revisions to the Dredged Material Management Program's Bioaccumulative Contaminants of Concern List. Final, January 5, 2007. Prepared for the Agencies of the Dredged Material Management Program, U.S. EPA Region 10.

Ichikawa, G. 2018. Cruise Report. A second statewide survey of bioaccumulation on the California coast (Year 1 of 2 years). Sampling Dates: April 16 – November 6, 2018.

Kinnetic Laboratories. 1994. Prince William Sound RCAC: Long-term environmental monitoring program. Annual monitoring report - 1993; Anchorage: Prince William Sound Regional Citizens Advisory Council. 1994.

Klasing, S. and R.K. Brodberg. 2008. Development of fish contaminant goals and Advisory Tissue Levels for common contaminants in California sport fish: Chlordane, DDTs, dieldrin, methylmercury, PCBs, selenium, and toxaphene. Office of Environmental Health Hazard Assessment, California Environmental Protection Agency, Sacramento, California. Available at: http://www.oehha.ca.gov/fish/gtlsv/pdf/FCGsATLs27June2008.pdf

Love, M.S. 2011. Certainly more than you want to know about the fishes of the Pacific coast: a postmodern experience. Really Big Press. University of California Santa Barbara. 650 pg.

Lowe, C.G., Topping, D.T., Cartamil, D.P., and Papastamatiou, Y.P. 2003. Movement patterns, home range, and habitat utilization of adult kelp bass *Paralabrax clathratus* in a temperate no-take marine reserve. Marine Ecology Progress Series 256:205-216.

Mason, T.J. and Lowe, C.G. 2010. Home range, habitat use, and site fidelity of barred sand bass within a southern California marine protected area. Fisheries Research 106:93-101.

McLaughlin, K, K. Schiff, B. Du, J. Davis, A. Bonnema, G. Ichikawa, B. Jakl, and W. Heim. 2020. Southern California Bight 2018 Regional Monitoring Program Volume V: Contaminant Bioaccumulation in Edible Sport Fish Tissue. . Technical Report 1155. Southern California Coastal Water Research Project (SCCWRP) in partnership with the State of CA Surface Water Ambient Monitoring Program (SWAMP). . December 2020. https://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/1155_B18Bioaccumulation.pdf.

McKinzie, Megan K., Jarvis, E.T., and Lowe, C.G. 2014. Fine-scale horizontal and vertical movement of barred sand bass, *Paralabrax nebulifer*, during spawning and non-spawning seasons. Fisheries Research 150:66-75.

Meese, E.N. and Lowe, C.G. 2019. Finding a resting place: how environmental conditions influence the habitat selection of resting batoids. Bulletin, Southern California Academy of Sciences 118(2):87-101.

Melwani, A.R., Greenfield, B.K., and Byron, E.R. 2009. Empirical estimation of biota exposure range for calculation of bioaccumulation parameters. Integrated Environmental Assessment and Management 5(1):138-149.

Office of Environmental Health Hazard Assessment (OEHHA). 2008. Development of Fish Contaminant Goals and Advisory Tissue Levels (ATLs) for Common Contaminants in California Sport Fish: Chlordane, DDTs, Dieldrin, Methylmercury, PCBs, Selenium, and Toxaphene. Updated ATLs November 2017.

Oregon Department of Environmental Quality (DEQ). 2007. Guidance for assessing bioaccumulative chemicals of concern in sediment. Environmental Cleanup Program. Technical Rept. 07-LQ-023A. Jan. 2007; updated April 2007.

Pacific Recreational Fisheries Information Network (RecFIN) database. 2020. Pacific States Marine Fisheries Commission. www.recfin.org

San Francisco Bay Regional Water Quality Control (SFBRWQCB). 2006. Mercury in San Francisco Bay. Proposed Basin Plan Amendment and Staff Report for Revised Total Maximum Daily Load (TMDL) and Proposed Mercury Water Quality Objectives. August 1, 2006.

SFBRWQCB. 2008. Amending the Water Quality Control Plan for the San Francisco Bay Region to Establish a Total Maximum Daily Load and Implementation Plan for PCBs in the San Francisco Bay. R2-2008-0012.

SFBRWQCB. 2015. Amending the Water Quality Control Plan for the San Francisco Bay Basin to Establish a Total Maximum Daily Load and Implementation Plan for Selenium in North San Francisco Bay. R2-2015-0048.

Speed, C.W., Field, I.C., Meekan, M.G., and Bradshaw, C.J.A. 2010. Complexities of coastal shark movements and their implications for management. Marine Ecology Progress Series 408:275-293.

Southern California Coastal Water Research Project (SCCWRP). 2018a. Quality Assurance (QA) Manual, Southern California Bight 2018 Regional Marine Monitoring Survey (Bight ’18). June 2018.

SCCWRP. 2018b. Sediment Quality Assessment (SQA) Field Operations Manual, Southern California Bight 2018 Regional Marine Monitoring Survey (Bight ’18). July 2018.

SCCWRP. 2018c. Sediment Quality Assessment (SQA) Workplan, Southern California Bight 2018 Regional Marine Monitoring Survey (Bight ’18). June 2018.

SCCWRP. 2020. Occurrence and Bioaccumulation of Dissolved Organochlorines in San Diego Bay. February 2020.

SCCWRP and MBC Applied Environmental Sciences. 1994. Santa Monica Bay Seafood Consumption Study. Santa Monica Bay Restoration Project.

State Water Resources Control Board (SWRCB). 2017. Surface Water Ambient Monitoring Program Quality Assurance Program Plan. Final Technical Report, May 2017.

SWRCB, 2018. Amendments to the Water Quality Control Plan for Enclosed Bays and Estuaries of California. Sediment Quality Provisions. State Water Resources Control Board and California Environmental Protection Agency. Prepared by Chris Beegan and Katherine Faick,

United States Environmental Protection Agency (USEPA). 1996. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods; Third Edition; Final Update 3A.

USEPA. 2000. Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Volume I: Fish Sampling and Analysis. Third Edition. Office of Science and Technology. Office of Water. U.S. Environmental Protection Agency. Washington, D.C.

USEPA, 2017a. National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-540-R-2017-001. January 2017.

USEPA, 2017b. National Functional Guidelines for Organic Superfund Methods Data Review, EPA-540-R-2017-002. January 2017.

Vaudo, J.J. and Lowe, C.G. 2006. Movement patterns of the round stingray *Urobatis halleri* near a thermal outfall. Journal of Fish Biology 68:1756-1766.

Vantuna Research Group (VRG). 2019. Fisheries Inventory and Utilization of San Diego Bay, San Diego, California for Surveys Conducted in April and July 2019. September 2019.

Wang, P. F., R. T. Chang, K. Richter, E. S. Gross, D. Sutton, and J. W. Gartner. 1998. Modeling tidal hydrodynamics of San Diego Bay, California, J Am Water Res Assoc 34, 1123- 1140.

Weston. 2008. Regional Harbor Monitoring Program Pilot Project 2005-08 Summary. Final Report. May 2008.

Weston. 2010. Regional Harbor Monitoring Program 2008 Final Report. May, 2010.

Wood Environment & Infrastructure Solutions, Inc. (Wood). 2018a. Quality Assurance Project Plan: 2018 Regional Harbor Monitoring Program. June 2018.

Wood. 2018b. Work Plan: 2018 Regional Harbor Monitoring Program. June 2018.

Wood. 2019. Influence of Dissolved Organochlorines on Bioaccumulation in San Diego Bay. Final Report. Prepared for the Port of San Diego and City of San Diego. September 19, 2019.

Wood. 2020. 2018 Regional Harbor Monitoring Program Report. Prepared for the Port of San Diego, City of San Diego, County of Orange, and City of Oceanside.

Zeeman, C.Q.T. 2004. Ecological Risk-Based Screening Levels for Contaminants in Sediments of San Diego Bay, Technical Memorandum CFWO-EC-TM-04-01. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, CA.

Zeeman, C.Q.T. 2016. Initial wildlife risk-based screening levels for contaminants in tissue of aquatic biota in San Diego Bay (2016). U.S. Fish and Wildlife Service.

APPENDIX A

FISH TISSUE COMPOSITE SUMMARY TABLE

Table A-1. Fish Tissue Composite Summary Table

Harbor	Species	Composite ID	# of Individuals from BOG	# of Individuals from RHMP	Composite Weight (g)	Composite Total Length Minimum (mm)	Composite Total Length Average (mm)	Composite Total Length Maximum (mm)	Tissue Type	Study Source (BOG/Bight/DOC)	Station ID	BOG Coordinate-Latitude	BOG Coordinate-Longitude	RHMP Coordinate-Trawl Start Latitude	RHMP Coordinate-Trawl Start Longitude	RHMP Coordinate-Trawl End Latitude	RHMP Coordinate-Trawl End Longitude
Dana Point Harbor	Barred Sand Bass	C1_90110DANABOG18BSB	2	3	93.2	200	237	292	Fillet	BOG	NA	33.45608	-117.69522	NA	NA	NA	NA
												33.45667	-117.69204				
										RHMP	B18-10068	NA	NA	33.45823	-117.70322	33.45681	-117.69793
Dana Point Harbor	Black Perch	C1_90110DANABOG18BLS	5	0	9.61	73	106	162	Fillet	BOG	NA	33.43681	-117.69590	NA	NA	NA	NA
												33.45584	-117.69791				
												33.45608	-117.69522				
												33.45828	-117.69202				
Dana Point Harbor	Chub Mackerel	C1_90110DANABOG18PCM	5	0	315	260	280	311	Fillet	BOG	NA	33.45667	-117.69204	NA	NA	NA	NA
												33.45843	-117.69068				
Dana Point Harbor	Shiner Surfperch	C1_90110DANABOG18SHS	7	12	171	71	105	126	Whole without Head, Tail and Guts	BOG	NA	33.45584	-117.69791	NA	NA	NA	NA
												33.45782	-117.70268				
												33.45828	-117.69202				
										RHMP	B18-10068	NA	NA	33.45823	-117.70322	33.45681	-117.69793
Dana Point Harbor	Spotted Sand Bass	C1_90110DANABOG18SSB	0	4	58.7	185	233	290	Fillet	RHMP	B18-10068	NA	NA	33.45823	-117.70322	33.45681	-117.69793
Dana Point Harbor	White Croaker	C1_90110DANABOG18WCR	3	0	51.7	212	226	245	Fillet	BOG	NA	33.45667	-117.69204	NA	NA	NA	NA
												33.45843	-117.69068				
Dana Point Harbor	White Croaker	C2_90110DANABOG18WCR	3	0	56.5	214	226	240	Fillet	BOG	NA	33.45843	-117.69068	NA	NA	NA	NA
Dana Point Harbor	White Croaker	C3_90110DANABOG18WCR	3	0	63.1	215	225	234	Fillet	BOG	NA	33.45843	-117.69068	NA	NA	NA	NA
Dana Point Harbor	White Surfperch	C1_90110DANABOG18WHS	4	1	54.8	136	195	230	Fillet	BOG	NA	33.45608	-117.69522	NA	NA	NA	NA
										RHMP	B18-10068	NA	NA	33.45823	-117.70322	33.45681	-117.69793
Oceanside Harbor	Barred Sand Bass	C1_90208OCNHBOG18BSB	3	0	132	236	268	324	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
												33.20723	-117.39430				
Oceanside Harbor	Barred Sand Bass	C2_90208OCNHBOG18BSB	3	0	92.8	222	269	305	Fillet	BOG	NA	33.20694	-117.39411	NA	NA	NA	NA
												33.20723	-117.39430				
Oceanside Harbor	Barred Sand Bass	C3_90208OCNHBOG18BSB	3	0	201	256	272	288	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
												33.20723	-117.39430				
												33.20844	-117.39554				
Oceanside Harbor	California Halibut	C1_90208OCNHBOG18CAH	3	0	44.1	168	183	197	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
Oceanside Harbor	Shiner Surfperch	C1_90208OCNHBOG18SHS	1	9	89.3	67	83	197	Whole without Head, Tail and Guts	BOG	NA	33.20844	-117.39554	NA	NA	NA	NA
										RHMP	B18-10071	NA	NA	33.20807	-117.39694	33.20762	-117.40073
Oceanside Harbor	Spotfin Croaker	C1_90208OCNHBOG18SFC	3	0	85.8	234	250	276	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
												33.21244	-117.39468				
Oceanside Harbor	Spotfin Croaker	C2_90208OCNHBOG18SFC	5	0	31.6	125	143	170	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
Oceanside Harbor	Spotfin Croaker	C3_90208OCNHBOG18SFC	5	0	33.9	132	142	149	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
Oceanside Harbor	Spotted Sand Bass	C1_90208OCNHBOG18SSB	4	0	167	214	274	311	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
												33.20723	-117.39430				
Oceanside Harbor	Spotted Sand Bass	C2_90208OCNHBOG18SSB	4	0	166	228	275	303	Fillet	BOG	NA	33.20723	-117.39430	NA	NA	NA	NA
												33.20771	-117.39526				
Oceanside Harbor	Spotted Sand Bass	C3_90208OCNHBOG18SSB	4	0	235	255	274	300	Fillet	BOG	NA	33.20631	-117.39317	NA	NA	NA	NA
												33.20723	-117.39430				

Table A-1. Fish Tissue Composite Summary Table

Harbor	Species	Composite ID	# of Individuals from BOG	# of Individuals from RHMP	Composite Weight (g)	Composite Total Length Minimum (mm)	Composite Total Length Average (mm)	Composite Total Length Maximum (mm)	Tissue Type	Study Source (BOG/Bight/DOC)	Station ID	BOG Coordinate-Latitude	BOG Coordinate-Longitude	RHMP Coordinate-Trawl Start Latitude	RHMP Coordinate-Trawl Start Longitude	RHMP Coordinate-Trawl End Latitude	RHMP Coordinate-Trawl End Longitude
Oceanside Harbor	White Surfperch	C1_90208OCNHBOG18WHS	0	4	76.1	182	208	235	Fillet	RHMP	B18-10071	NA	NA	33.20807	-117.39694	33.20762	-117.40073
Oceanside Harbor	Yellowfin Croaker	C1_90208OCNHBOG18YFC	3	0	191	325	353	399	Fillet	BOG	NA	33.20723	-117.39430	NA	NA	NA	NA
Oceanside Harbor	Yellowfin Croaker	C2_90208OCNHBOG18YFC	3	0	183	345	355	364	Fillet	BOG	NA	33.20723	-117.39430	NA	NA	NA	NA
Mission Bay	Black Perch	C1_90606MISSBOG18BLS	5	0	213	204	216	223	Fillet	BOG	NA	32.76653 32.77102	-117.22212 -117.24156	NA	NA	NA	NA
Mission Bay	Brown Smooth-hound Shark	C1_90606MISSBOG18BSH	3	0	211	665	712	756	Fillet	BOG	NA	32.76653	-117.22212	NA	NA	NA	NA
Mission Bay	California Corbina	C1_90606MICACOG18CAC	3	0	366	410	450	495	Fillet	BOG	NA	32.76653 32.77102	-117.22212 -117.24156	NA	NA	NA	NA
Mission Bay	Round Stingray	C1_90606MISSBOG18RSR	0	5	118	270	297	335	Fillet	RHMP	B18-10019	NA	NA	32.76765	-117.24167	32.76273	-117.24393
											B18-10016	NA	NA	32.78372	-117.24180	32.78107	-117.24440
Mission Bay	Salema	C1_90606MISSBOG18SEL	5	0	135	210	221	242	Fillet	BOG	NA	32.76653 32.77102	-117.22212 -117.24156	NA	NA	NA	NA
Mission Bay	Shiner Surfperch	C1_90606MISSBOG18SHS	4	16	111	72	84	140	Whole without Head, Tail and Guts	BOG	NA	32.76653 32.76799 32.77052	-117.22212 -117.22759 -117.24136	NA	NA	NA	NA
										RHMP	B18-10016	NA	NA	32.78372	-117.24180	32.78107	-117.24440
Mission Bay	Spotted Sand Bass	C1_90606MISSBOG18SSB	5	0	212	260	309	356	Fillet	BOG	NA	32.76888 32.76889 32.77072	-117.24258 -117.24271 -117.24265	NA	NA	NA	NA
Mission Bay	Spotted Sand Bass	C2_90606MISSBOG18SSB	5	0	199	244	249	257	Fillet	BOG	NA	32.76888 32.76889 32.77072	-117.24258 -117.24271 -117.24265	NA	NA	NA	NA
Mission Bay	Spotted Sand Bass	C3_90606MISSBOG18SSB	5	0	212	225	236	243	Fillet	BOG	NA	32.76888 32.77072	-117.24258 -117.24265	NA	NA	NA	NA
Mission Bay	White Surfperch	C1_90606MISSBOG18WHS	5	0	339	268	275	284	Fillet	BOG	NA	32.76653	-117.22212	NA	NA	NA	NA
Mission Bay	White Surfperch	C2_90606MISSBOG18WHS	5	0	260	253	259	265	Fillet	BOG	NA	32.76653	-117.22212	NA	NA	NA	NA
Mission Bay	Yellowfin Croaker	C1_90606MISSBOG18YFC	5	0	229	241	290	350	Fillet	BOG	NA	32.76653 32.76674 32.76759	-117.22212 -117.21999 -117.22614	NA	NA	NA	NA
Mission Bay	Yellowfin Croaker	C2_90606MISSBOG18YFC	4	1	182	224	292	345	Fillet	BOG	NA	32.76759	-117.22614	NA	NA	NA	NA
										RHMP	B18-10016	NA	NA	32.78372	-117.24180	32.78107	-117.24440
Mission Bay	Yellowfin Croaker	C3_90606MISSBOG18YFC	5	0	145	205	292	340	Fillet	BOG	NA	32.76653 32.76674 32.76759	-117.22212 -117.21999 -117.22614	NA	NA	NA	NA
North SD Bay	Barred Sand Bass	C1_91203SDNBBOG18BSB	3	1	117	215	280	340	Fillet	BOG	NA	32.70275	-117.16718	NA	NA	NA	NA
										RHMP	B18-10030	NA	NA	32.68768	-117.22990	32.22858	-117.22853
North SD Bay	Barred Sand Bass	C2_91203SDNBBOG18BSB	1	3	180	235	279	327	Fillet	BOG	NA	32.70275	-117.16718	NA	NA	NA	NA
										RHMP	B18-10030	NA	NA	32.69127	-117.23154	32.68601	-117.23005
North SD Bay	Black Croaker	C1_91203SDNBBOG18BKC	2	2	135	236	265	283	Fillet	BOG	NA	32.72386	-117.21175	NA	NA	NA	NA
										RHMP	B18-10030	NA	NA	32.68768	-117.22990	32.22858	-117.22853
										RHMP	B18-10030	NA	NA	32.69127	-117.23154	32.68601	-117.23005
North SD Bay	Black Perch	C1_91203SDNBBOG18BLS	0	5	175	-88	-88	-88	Fillet	DOC	SDBay-01	NA	NA	32.72440	-117.22500	NA	NA

Table A-1. Fish Tissue Composite Summary Table

Harbor	Species	Composite ID	# of Individuals from BOG	# of Individuals from RHMP	Composite Weight (g)	Composite Total Length Minimum (mm)	Composite Total Length Average (mm)	Composite Total Length Maximum (mm)	Tissue Type	Study Source (BOG/Bight/DOC)	Station ID	BOG Coordinate-Latitude	BOG Coordinate-Longitude	RHMP Coordinate-Trawl Start Latitude	RHMP Coordinate-Trawl Start Longitude	RHMP Coordinate-Trawl End Latitude	RHMP Coordinate-Trawl End Longitude
North SD Bay	Chub Mackerel	C1_91203SDNBBOG18PCM	5	0	131	242	274	320	Fillet	BOG	NA	32.69468 32.70152 32.70932	-117.23530 -117.17015 -117.21938	NA	NA	NA	NA
North SD Bay	Chub Mackerel	C2_91203SDNBBOG18PCM	5	0	138	243	274	314	Fillet	BOG	NA	32.69468 32.70152	-117.23530 -117.17015	NA	NA	NA	NA
North SD Bay	Chub Mackerel	C3_91203SDNBBOG18PCM	5	0	119	247	274	314	Fillet	BOG	NA	32.70152 32.70932	-117.17015 -117.21938	NA	NA	NA	NA
North SD Bay	Kelp Bass	C1_91203SDNBBOG18KPB	4	0	311	272	305	352	Fillet	BOG	NA	32.69468	-117.23530	NA	NA	NA	NA
North SD Bay	Kelp Bass	C2_91203SDNBBOG18KPB	4	0	284	277	303	333	Fillet	BOG	NA	32.69468	-117.23530	NA	NA	NA	NA
North SD Bay	Kelp Bass	C3_91203SDNBBOG18KPB	4	0	223	276	303	326	Fillet	BOG	NA	32.69468 32.70932	-117.23530 -117.21938	NA	NA	NA	NA
North SD Bay	Leopard shark	C1_91203SDNBBOG18LPS	2	0	323	1430	1435	1440	Fillet	BOG	NA	32.69585	-117.15646	NA	NA	NA	NA
North SD Bay	Northern Anchovy	C1_91203SDNBBOG18NAC	0	120	277	-88	65	95	Whole organism	RHMP	B18-10022	NA	NA	32.72271	-117.18377	32.71821	-117.18581
North SD Bay	Northern Anchovy	C2_91203SDNBBOG18NAC	0	74	51.4	42	49	55	Whole organism	DOC	SDBay-03	NA	NA	32.72624	-117.17965	32.72271	-117.18178
North SD Bay	Queenfish	C1_91203SDNBBOG18QEF	0	5	149	205	215	233	Fillet	RHMP	B18-10022	NA	NA	32.72271	-117.18377	32.71821	-117.18581
North SD Bay	Queenfish	C2_91203SDNBBOG18QEF	0	5	151	198	201	205	Fillet	RHMP	B18-10022	NA	NA	32.72271	-117.18377	32.71821	-117.18581
North SD Bay	Queenfish	C3_91203SDNBBOG18QEF	0	5	114	185	192	195	Fillet	RHMP	B18-10022	NA	NA	32.72271	-117.18377	32.71821	-117.18581
North SD Bay	Round Stingray	C1_91203SDNBBOG18RSR	0	4	72.6	285	305	345	Fillet	RHMP	B18-10023 B18-10022	NA	NA	32.71718 32.72271	-117.21580 -117.18377	32.71901 32.71821	-117.21017 -117.18581
North SD Bay	Round Stingray	C2_91203SDNBBOG18RSR	0	4	36.2	200	238	280	Fillet	RHMP	B18-10022	NA	NA	32.72271	-117.18377	32.71821	-117.18581
North SD Bay	Shiner Surfperch	C1_91203SDNBBOG18SHS	20	0	322	83	118	143	Whole without Head, Tail and Guts	BOG	NA	32.72386 32.72391	-117.21175 -117.21246	NA	NA	NA	NA
North SD Bay	Slough Anchovy	C1_91203SDNBBOG18SAC	0	8	19.5	67	71	76	Whole organism	DOC	SDBay-03	NA	NA	32.72624	-117.17965	32.72271	-117.18178
North SD Bay	Spotted Sand Bass	C1_91203SDNBBOG18SSB	3	0	179	269	306	335	Fillet	BOG	NA	32.70275 32.71557	-117.16718 -117.22250	NA	NA	NA	NA
North SD Bay	Spotted Sand Bass	C2_91203SDNBBOG18SSB	3	0	139	261	305	335	Fillet	BOG	NA	32.70275	-117.16718	NA	NA	NA	NA
North SD Bay	Spotted Sand Bass	C3_91203SDNBBOG18SSB	3	0	229	280	303	327	Fillet	BOG	NA	32.70275	-117.16718	NA	NA	NA	NA
South SD Bay	Black Croaker	C1_91202SDSBBOG18BKC	1	4	207	218	234	250	Fillet	BOG	NA	32.64306	-117.12270	NA	NA	NA	NA
										RHMP	B18-10038	NA	NA	32.64243	-117.12617	32.64735	-117.12915
											B18-10034	NA	NA	32.66512	-117.15005	32.66725	-117.14429
											B18-10039	NA	NA	32.64269	-117.13912	32.64048	-117.13709
South SD Bay	Chub Mackerel	C1_91202SDSBBOG18PCM	0	5	230	277	276	290	Fillet	DOC	SDBay-07	NA	NA	32.68627	-117.13381	NA	NA
South SD Bay	Leopard shark	C1_91202SDSBBOG18LPS	5	0	325	1263	1368	1450	Fillet	BOG	NA	32.68558	-117.14937	NA	NA	NA	NA
South SD Bay	Northern Anchovy	C1_91202SDSBBOG18NAC	0	30	74.0	64	75	82	Whole organism	DOC	SDBay-07	NA	NA	32.68225	-117.13720	32.68566	-117.14220
South SD Bay	Northern Anchovy	C2_91202SDSBBOG18NAC	0	30	46.8	46	65	76	Whole organism	DOC	SDBay-07	NA	NA	32.68225	-117.13720	32.68566	-117.14220
South SD Bay	Round Stingray	C1_91202SDSBBOG18RSR	0	5	82.4	253	282	320	Fillet	RHMP	B18-10034	NA	NA	32.66512	-117.15005	32.66725	-117.14429

APPENDIX B

CHEMISTRY AND BSAF SUMMARY TABLES

Tissue Chemistry Summary Table

Appendix Table B-1. Tissue Chemistry Summary Table

Harbor	Species	Feeding Guild	Composite ID	Lipids	alpha-Chlordane	cis-Nonachlor	gamma-Chlordane	Oxychlordane	trans-Nonachlor	Total Chlordanes[1]	2,4'-DDD	2,4'-DDE	2,4'-DDT	4,4'-DDD	4,4'-DDE	4,4'-DDT	Total DDTs[2]	4,4'-DDMU	Dieldrin
			MDL	*0.01*	*0.19*	*0.19*	*0.18*	*0.25*	*0.19*	*NA*	*0.27*	*0.20*	*0.19*	*0.20*	*0.19*	*0.13*	*NA*	*1.00*	*0.1*
			RL	*0.05*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*NA*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*NA*	*0.5*	*0.2*
			Units	%	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.627	ND	ND	ND	ND	0.228	0.228	ND	ND	ND	ND	4.06	ND	4.06	ND	ND
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	0.877	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	3.24	ND	3.24	ND	ND
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	1.08	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	11.2	ND	11.2	ND	ND
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	1.30	ND	0.215	ND	ND	0.584	0.799	ND	ND	ND	ND	11.6	ND	11.6	ND	ND
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.426	ND	0.351	ND	ND	0.523	0.874	ND	ND	ND	ND	1.96	ND	1.96	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.281	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	3.13	ND	3.13	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.278	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.98	ND	1.98	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.221	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	2.21	ND	2.21	ND	ND
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	0.718	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.98	ND	1.98	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.472	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	4.66	ND	4.66	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	1.16	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	10.9	ND	10.9	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	1.39	ND	ND	ND	ND	0.366	0.366	ND	ND	ND	ND	15.1	ND	15.1	ND	ND
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.412	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	6.59	ND	6.59	ND	ND
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	4.36	ND	ND	ND	ND	0.732	0.732	ND	ND	ND	ND	28.0	ND	28.0	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	0.322	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	2.02	ND	2.02	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	0.495	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	2.14	ND	2.14	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.446	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.83	ND	1.83	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	1.77	ND	0.265	ND	ND	0.620	0.885	ND	ND	ND	ND	18.7	ND	18.7	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.752	ND	ND	ND	ND	0.204	0.204	ND	ND	ND	ND	7.24	ND	7.24	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	0.833	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	5.53	ND	5.53	ND	ND
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.756	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	3.41	ND	3.41	ND	ND
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.582	0.3	ND	ND	ND	0.289	0.589	ND	ND	ND	ND	19.4	ND	19.4	1.48	ND
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.418	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	5.66	ND	5.66	ND	ND
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.596	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	0.787	ND	0.79	ND	ND
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	0.257	0.281	ND	ND	ND	0.378	0.659	ND	ND	ND	ND	12.9	ND	12.9	ND	ND
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.982	ND	0.301	ND	ND	0.346	0.647	ND	ND	ND	ND	3.11	ND	3.11	ND	ND
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.514	ND	ND	ND	ND	0.254	0.254	ND	ND	ND	ND	ND	ND	*0.13*	ND	ND
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	0.526	0.193	0.415	ND	ND	0.435	1.04	ND	ND	ND	ND	3.86	ND	3.86	ND	ND
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	2.39	0.44	0.752	0.183	ND	0.706	2.08	ND	ND	ND	ND	4.42	ND	4.42	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.327	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	0.439	ND	0.439	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.459	ND	ND	ND	ND	0.234	0.234	ND	ND	ND	ND	0.716	ND	0.716	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.401	ND	ND	ND	ND	0.236	0.236	ND	ND	ND	ND	0.508	ND	0.508	ND	ND
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.415	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.39	ND	1.39	ND	ND
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.351	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.22	ND	1.22	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.525	ND	ND	ND	ND	0.344	0.344	ND	ND	ND	ND	3.93	ND	3.93	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.418	ND	ND	ND	ND	0.270	0.270	ND	ND	ND	ND	2.66	ND	2.66	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.387	0.215	ND	ND	ND	0.259	0.474	ND	ND	ND	ND	3.44	ND	3.44	ND	ND
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.385	ND	ND	ND	ND	0.285	0.285	ND	ND	ND	ND	1.73	ND	1.73	ND	ND
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.382	ND	ND	ND	ND	0.220	0.220	ND	ND	ND	ND	1.91	ND	1.91	ND	ND
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	DUP-C2_91203SDNBBOG18BSB	0.440	ND	0.229	ND	ND	0.297	0.526	ND	ND	ND	ND	1.45	ND	1.45	ND	ND
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.243	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.83	ND	1.83	ND	ND
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.435	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	1.25	2.77	ND	4.02	ND	ND
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.235	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	3.50	ND	3.50	ND	ND
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.329	ND	0.397	ND	ND	0.380	0.777	ND	ND	ND	ND	6.80	ND	6.80	ND	ND
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	0.310	ND	0.221	ND	ND	0.345	0.566	ND	ND	ND	ND	6.14	ND	6.14	ND	ND
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	1.23	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	8.09	ND	8.09	ND	ND
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	1.52	ND	ND	ND	ND	0.201	0.201	ND	ND	ND	ND	10.5	ND	10.5	ND	ND
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	1.00	ND	ND	ND	ND	0.213	0.213	ND	ND	ND	ND	7.22	ND	7.22	ND	ND
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	0.212	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	4.32	ND	4.32	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	2.86	0.682	1.00	0.450	ND	0.636	2.77	ND	ND	ND	ND	4.94	ND	4.94	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	1.29	0.442	0.930	0.342	ND	0.698	2.41	ND	ND	ND	ND	4.58	ND	4.58	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	DUP-C1_91203SDNBBOG18NAC	2.81	0.727	0.976	0.336	ND	1.17	3.21	ND	ND	ND	ND	5.94	ND	5.94	ND	ND
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	0.468	ND	ND	ND	ND	0.361	0.361	ND	ND	ND	0.828	6.63	ND	7.46	ND	ND
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	0.614	ND	0.201	ND	ND	ND	0.201	ND	ND	ND	ND	2.63	ND	2.63	ND	ND
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	0.764	ND	0.320	ND	ND	ND	0.320	ND	ND	ND	ND	2.84	ND	2.84	ND	ND
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.459	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	ND	ND	*0.13*	ND	ND
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	0.210	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	ND	ND	*0.13*	ND	ND
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	4.90	0.439	0.708	ND	ND	1.04	2.19	ND	ND	ND	2.62	10.2	ND	12.82	ND	ND
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	1.35	0.592	1.13	0.249	ND	0.937	2.91	ND	ND	ND	ND	6.45	ND	6.45	ND	ND
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.200	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	2.38	ND	2.38	ND	ND
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.275	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	0.362	ND	0.362	ND	ND
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.160	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	0.538	ND	0.538	ND	ND
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.284	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.36	ND	1.36	ND	ND
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	0.180	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	3.59	ND	3.59	ND	ND
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	0.155	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	2.83	ND	2.83	ND	ND
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	2.91	0.653	0.994	0.496	ND	1.31	3.45	ND	ND	ND	ND	12.2	ND	12.20	ND	ND
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	2.09	0.707	0.840	0.418	ND	0.858	2.82	ND	ND	ND	ND	7.93	ND	7.93	ND	ND
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.492	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	ND	ND	*0.13*	ND	ND
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.505	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	ND	ND	*0.13*	ND	ND
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	1.37	0.243	0.613	ND	ND	0.760	1.62	ND	ND	ND	ND	8.81	ND	8.81	ND	ND
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	1.32	0.32	0.706	ND	ND	0.786	1.81	ND	ND	ND	ND	8.70	ND	8.70	ND	ND
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	1.36	0.358	0.782	ND	ND	0.795	1.94	ND	ND	ND	ND	8.78	ND	8.78	ND	ND
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.259	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	1.04	ND	1.04	ND	ND
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.199	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	0.818	ND	0.818	ND	ND
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.264	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	0.881	ND	0.881	ND	ND
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	0.657	ND	ND	ND	ND	ND	*0.125*	ND	ND	ND	ND	3.27	ND	3.27	ND	ND

Notes:

[a] - Tissue for composites combined from RHMP, BOG, and DOS programs. SD Bay ecoregions (North/South) follow BOG protocols for creation of composites for analysis.

Italicized values represent 1/2 of the highest value MDL for all associated congeners of the summed analyte.

MDL = Method Detection Limit; NA = Not Applicable; ND = Not Detected (<MDL); RL = Reporting Limit

J-flags (result between the MDL and the RL) are reported as whole values.

1 = Total Chlordanes includes the sum of alpha-chlordane, gamma-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane.

2 = Total detectable DDTs includes the sum of 2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, 2,4'-DDT, and 4,4'-DDT.

Appendix Table B-1. Tissue Chemistry Summary Table

Harbor	Species	Feeding Guild	Composite ID	1,6,7-Trimethylnaphthalene	1-Methylnaphthalene	1-Methylphenanthrene	2,6-Dimethylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[e]pyrene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Biphenyl	Chrysene	Dibenz[a,h]anthracene	Dibenzothiophene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Perylene	Phenanthrene	Pyrene	Total PAHs[3]
			MDL	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*1*	*NA*
			RL	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*5*	*NA*
			Units	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	DUP-C2_91203SDNBBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Northern Anchovy	Forage - Planktivore	DUP-C1_91203SDNBBOG18NAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.5*

Notes:

[a] - Tissue for composites combined from RHMP, BOG, and DOS programs. SD Bay ecoregions (North/South) follow BOG protocols for creation of composites for analysis.

Italicized values represent 1/2 of the highest value MDL for all associated congeners of the summed analyte.

MDL = Method Detection Limit; NA = Not Applicable; ND = Not Detected (<MDL); RL = Reporting Limit

J-flags (result between the MDL and the RL) are reported as whole values.

3 = Total PAHs includes the sum of acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnapthalene, 2-methylnapthalene, 1-methylphenanthrene, and 1,6,7-trimethylnaphthalene.

Appendix Table B-1. Tissue Chemistry Summary Table

Harbor	Species	Feeding Guild	Composite ID	PBDE017	PBDE028	PBDE047	PBDE049	PBDE066	PBDE085	PBDE099	PBDE100	PBDE138	PBDE153	PBDE154	PBDE183	PBDE209	Total PBDEs[4]	PCB-003	PCB-005	PCB-008	PCB-015	PCB-018	PCB-027	PCB-028	PCB-029	PCB-031	PCB-033	PCB-037
			MDL	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*0.05*	*1*	*NA*	*0.25*	*0.25*	*0.017*	*0.25*	*0.029*	*0.250*	*0.023*	*0.250*	*0.250*	*0.250*	*0.060*
			RL	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*5*	*NA*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*
			Units	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	ND	ND	0.569	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.569	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	ND	ND	0.837	ND	ND	ND	0.353	0.220	ND	ND	ND	ND	ND	1.41	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	ND	ND	1.38	0.155	ND	ND	ND	0.291	ND	ND	0.085	ND	ND	1.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	0.136	ND	ND	ND	ND	ND	ND	0.136	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	ND	ND	ND	ND	ND	ND	0.146	0.187	ND	ND	ND	ND	ND	0.333	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	ND	0.314	0.850	ND	ND	ND	0.164	0.222	ND	ND	ND	ND	ND	1.55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	ND	0.499	1.32	ND	ND	ND	0.133	0.281	ND	ND	ND	ND	ND	2.23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	ND	ND	0.968	ND	ND	ND	0.109	0.290	ND	ND	ND	ND	ND	1.37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	ND	ND	0.264	ND	ND	ND	0.106	0.247	ND	ND	ND	ND	ND	0.617	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	ND	ND	0.520	ND	ND	ND	0.129	0.156	ND	ND	ND	ND	ND	0.805	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	ND	ND	0.416	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.416	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	ND	ND	0.510	0.974	ND	ND	0.229	0.196	ND	ND	ND	ND	ND	1.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	ND	0.150	3.01	ND	ND	ND	0.193	0.688	ND	ND	ND	ND	ND	4.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	ND	ND	0.531	ND	ND	ND	0.169	0.130	ND	ND	ND	ND	ND	0.830	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	0.278	0.170	ND	ND	ND	ND	ND	0.448	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	ND	ND	1.04	ND	ND	ND	0.187	0.289	ND	ND	ND	ND	ND	1.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	ND	ND	0.676	ND	ND	ND	ND	0.249	ND	ND	ND	ND	ND	0.925	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	ND	ND	0.987	ND	ND	ND	ND	0.352	ND	ND	ND	ND	ND	1.34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	ND	ND	0.308	ND	ND	ND	0.297	0.208	ND	ND	ND	ND	ND	0.813	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	DUP-C2_91203SDNBBOG18BSB	ND	ND	ND	ND	ND	ND	0.156	0.180	ND	ND	ND	ND	ND	0.336	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	ND	ND	ND	ND	ND	ND	ND	0.188	ND	ND	ND	ND	ND	0.188	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	ND	ND	0.382	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.382	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	ND	ND	1.12	0.175	0.652	ND	0.612	0.476	ND	ND	0.208	ND	ND	3.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	ND	ND	1.04	0.169	ND	ND	0.231	0.191	ND	ND	ND	ND	ND	1.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	ND	ND	1.03	0.146	ND	ND	0.320	0.171	ND	ND	ND	ND	ND	1.67	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	ND	ND	1.44	0.157	ND	ND	0.308	0.253	ND	ND	ND	ND	ND	2.16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	ND	ND	2.51	0.188	ND	ND	0.430	0.403	ND	ND	0.123	ND	ND	3.65	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	ND	ND	0.772	0.110	ND	ND	0.197	0.346	ND	ND	ND	ND	ND	1.43	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	ND	0.156	1.15	ND	ND	ND	0.207	0.274	ND	ND	ND	ND	ND	1.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	ND	ND	1.03	0.176	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	ND	ND	0.624	ND	ND	ND	0.232	0.286	ND	ND	ND	ND	ND	1.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	DUP-C1_91203SDNBBOG18NAC	ND	ND	0.847	0.161	ND	ND	0.133	0.222	ND	ND	0.059	ND	ND	1.42	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	ND	ND	0.856	ND	ND	ND	0.173	0.228	ND	ND	0.092	ND	ND	1.35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	ND	ND	0.775	ND	ND	ND	0.209	0.232	ND	ND	ND	ND	ND	1.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	ND	0.135	0.775	ND	ND	ND	ND	0.212	ND	ND	ND	ND	ND	1.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	ND	ND	ND	ND	ND	ND	0.197	ND	ND	ND	ND	ND	ND	0.197	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	ND	ND	0.668	ND	ND	ND	1.270	ND	ND	0.391	ND	ND	ND	2.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	ND	ND	2.97	0.297	ND	ND	0.185	0.481	ND	ND	0.079	ND	ND	4.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	ND	ND	0.741	ND	ND	ND	0.228	0.161	ND	ND	ND	ND	ND	1.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	0.102	0.098	ND	ND	ND	ND	ND	0.200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	ND	0.177	0.557	0.085	ND	ND	0.205	0.193	ND	ND	ND	ND	ND	1.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	ND	0.214	0.824	ND	ND	ND	0.105	0.134	ND	ND	ND	ND	ND	1.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	ND	ND	0.715	ND	ND	ND	0.198	0.262	ND	ND	ND	ND	ND	1.18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	ND	ND	0.524	ND	ND	ND	0.154	0.236	ND	ND	ND	ND	ND	0.914	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	ND	ND	ND	ND	ND	ND	0.304	ND	ND	ND	ND	ND	ND	0.304	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	ND	0.179	0.916	ND	ND	ND	0.345	0.257	ND	ND	ND	ND	ND	1.70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	ND	ND	0.919	0.112	ND	ND	0.292	0.309	ND	ND	ND	ND	ND	1.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	ND	ND	0.731	ND	ND	ND	0.296	0.183	ND	ND	ND	ND	ND	1.21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	0.139	ND	ND	ND	ND	ND	ND	0.139	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.025*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	ND	ND	1.74	ND	ND	ND	ND	0.353	ND	ND	ND	ND	ND	2.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

[a] - Tissue for composites combined from RHMP, BOG, and DOS programs. SD Bay ecoregions (North/South) follow BOG protocols for creation of composites for analysis.

Italicized values represent 1/2 of the highest value MDL for all associated congeners of the summed analyte.

MDL = Method Detection Limit; NA = Not Applicable; ND = Not Detected (<MDL); RL = Reporting Limit

J-flags (result between the MDL and the RL) are reported as whole values.

4 = Total PBDEs includes the sum PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, and 209.

Appendix Table B-1. Tissue Chemistry Summary Table

Harbor	Species	Feeding Guild	Composite ID	PCB-044	PCB-049	PCB-052	PCB-056 (60)	PCB-066	PCB-070	PCB-074	PCB-077	PCB-081	PCB-087	PCB-095	PCB-097	PCB-099	PCB-101	PCB-105	PCB-110	PCB-114	PCB-118	PCB-119	PCB-123	PCB-126	PCB-128	PCB-137	PCB-138	PCB-141	PCB-149
			MDL	*0.028*	*0.036*	*0.012*	*0.250*	*0.027*	*0.023*	*0.021*	*0.018*	*0.084*	*0.081*	*0.250*	*0.250*	*0.028*	*0.027*	*0.047*	*0.074*	*0.072*	*0.069*	*0.071*	*0.018*	*0.086*	*0.081*	*0.250*	*0.057*	*0.250*	*0.092*
			RL	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*
			Units	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.517	ND	ND	0.713	0.643	ND	ND	ND	1.09	ND	ND	ND	ND	ND	1.90	ND	0.393
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.714	ND	ND	0.439	0.322	ND	ND	ND	0.421	ND	ND	ND	ND	ND	0.606	ND	0.129
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.417	0.428	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.736	ND	0.255
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	ND	ND	ND	ND	ND	0.496	0.384	ND	ND	0.519	ND	ND	0.996	0.758	ND	0.519	ND	1.42	ND	ND	ND	ND	ND	2.31	ND	0.587
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	ND	0.215	ND	ND	ND	ND	0.327	ND	ND	ND	ND	ND	1.46	0.654	0.683	ND	ND	1.82	ND	ND	ND	0.571	ND	2.49	ND	0.337
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.431	0.246	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.356	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.393	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.356	ND	ND	ND	ND	ND	ND	ND	0.335	ND	ND	ND	ND	ND	0.381	ND	ND
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	ND	0.277	0.354	ND	0.463	ND	ND	ND	ND	0.44	ND	ND	0.772	0.632	ND	0.317	ND	0.770	ND	ND	ND	ND	ND	1.09	ND	0.345
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	ND	0.336	0.223	ND	ND	ND	ND	ND	ND	0.615	0.311	ND	1.00	0.648	ND	0.432	ND	1.14	ND	ND	ND	0.359	ND	1.48	ND	0.577
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	ND	0.521	0.349	ND	ND	ND	ND	ND	ND	0.556	0.504	0.445	1.33	1.1	0.321	0.689	ND	1.84	ND	ND	ND	0.528	ND	2.73	ND	0.91
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	ND	0.285	0.227	ND	ND	ND	ND	ND	ND	0.402	ND	ND	0.753	0.679	ND	0.34	ND	0.811	ND	ND	ND	0.193	ND	1.08	ND	0.333
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	ND	1.44	1.77	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.62	2.18	ND	1.56	ND	3.66	ND	ND	ND	ND	ND	3.79	ND	1.13
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.471	0.365	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.204	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.251	0.156	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.282	ND	ND
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.407	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.267	ND	ND
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	ND	0.498	0.387	ND	ND	0.308	0.354	ND	ND	0.685	ND	ND	1.59	1.08	ND	0.635	ND	1.99	ND	ND	ND	ND	ND	3.04	ND	0.791
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.574	ND	ND	0.826	0.673	ND	ND	ND	0.955	ND	ND	ND	ND	ND	1.27	ND	0.354
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.559	ND	ND	0.800	0.498	ND	0.249	ND	0.959	ND	ND	ND	ND	ND	1.06	ND	0.287
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.453	ND	ND	0.521	0.552	ND	ND	ND	0.517	ND	ND	ND	ND	ND	0.685	ND	0.177
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	ND	0.514	0.409	ND	ND	ND	ND	ND	ND	0.586	0.282	ND	0.899	0.833	ND	0.548	ND	0.920	ND	ND	ND	ND	ND	1.51	ND	0.556
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.494	0.465	ND	0.735	1.01	ND	0.619	ND	1.14	ND	ND	ND	ND	ND	1.82	ND	0.819
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.768	0.461	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.478	ND	ND
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.76	0.42	ND	0.397	ND	2.01	ND	ND	ND	ND	ND	2.97	ND	0.225
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	ND	0.963	0.834	ND	ND	ND	ND	ND	ND	0.675	0.935	1.04	2.13	2.38	ND	1.34	ND	2.25	ND	ND	ND	0.827	ND	3.96	ND	1.98
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.511	ND	ND	ND	ND	0.870	ND	ND	ND	ND	ND	0.874	ND	ND
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	ND	0.301	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.17	1.12	ND	0.615	ND	0.895	ND	ND	ND	ND	ND	1.25	ND	0.571
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	ND	0.808	0.717	ND	ND	ND	ND	ND	ND	ND	0.571	ND	2.37	1.59	ND	0.806	ND	2.29	ND	ND	ND	ND	ND	2.49	ND	1.05
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.507	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.348	ND	0.152
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.344	0.371	ND	ND	ND	0.517	ND	ND	ND	ND	ND	0.666	ND	ND
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.666	0.468	ND	ND	ND	0.499	ND	ND	ND	ND	ND	0.801	ND	ND
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.694	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.666	ND	ND
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	ND	0.409	0.499	ND	ND	ND	ND	ND	ND	ND	0.374	ND	1.11	1.04	ND	0.537	ND	1.14	ND	ND	ND	ND	ND	1.70	ND	0.664
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	ND	ND	0.325	ND	ND	ND	ND	ND	ND	0.906	ND	ND	1.20	0.945	ND	0.710	ND	1.07	ND	ND	ND	ND	ND	1.87	ND	0.850
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	ND	0.34	0.297	ND	ND	ND	ND	ND	ND	0.650	0.253	ND	0.830	0.872	ND	0.458	ND	0.810	60.2	ND	ND	ND	ND	1.44	ND	0.782
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	ND	0.509	0.642	ND	ND	ND	ND	ND	ND	0.914	0.603	0.488	2.36	2.51	0.452	0.868	ND	2.19	ND	ND	ND	ND	ND	3.69	ND	1.67
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	ND	0.661	0.791	ND	ND	ND	ND	ND	ND	0.972	0.570	0.702	2.50	2.07	0.511	0.807	ND	3.03	ND	ND	ND	ND	ND	3.94	ND	1.53
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	DUP-C2_91203SDNBBOG18BSB	ND	0.608	0.591	ND	0.756	ND	0.289	ND	ND	0.847	0.566	0.420	2.27	1.96	0.648	0.692	ND	2.66	ND	ND	ND	0.848	ND	4.71	0.308	1.55
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.982	0.731	ND	ND	ND	0.971	ND	ND	ND	ND	ND	2.02	ND	0.471
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	ND	0.731	0.962	ND	1.48	0.725	0.455	ND	ND	0.552	0.462	ND	2.16	1.99	0.807	0.645	ND	2.7	ND	ND	ND	ND	ND	4.02	ND	0.862
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	ND	0.569	0.593	ND	0.854	ND	ND	ND	ND	1.04	0.607	1.02	1.94	2.05	0.559	1.33	ND	2.09	ND	ND	ND	0.654	ND	3.86	ND	1.62
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.444	1.17	1.58	ND	1.77	0.668	0.478	ND	ND	2.03	2.68	2.44	6.35	7.93	1.47	4.28	ND	6.21	ND	ND	ND	2.14	ND	14.4	0.886	6.93
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	0.329	0.947	1.19	ND	1.35	0.494	0.477	ND	ND	1.48	1.71	1.51	3.85	5.49	1.12	2.46	ND	4.24	ND	ND	ND	1.38	ND	8.72	0.516	4.18
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	ND	0.601	0.655	ND	ND	ND	ND	ND	ND	0.691	0.532	ND	1.93	1.74	ND	0.902	ND	1.79	ND	ND	ND	ND	ND	3.85	ND	1.19
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	ND	0.606	0.534	ND	ND	ND	ND	ND	ND	ND	0.639	ND	1.45	1.34	ND	0.718	ND	1.40	ND	ND	ND	ND	ND	3.16	ND	0.955
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	ND	0.483	0.373	ND	ND	ND	ND	ND	ND	0.631	0.575	0.339	1.32	1.16	ND	0.599	ND	1.94	ND	ND	ND	ND	ND	3.35	ND	1.09
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	ND	ND	ND	ND	0.428	ND	ND	ND	ND	ND	ND	ND	2.48	ND	ND	ND	ND	2.68	ND	ND	ND	ND	ND	4.51	ND	ND
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	ND	3.12	4.05	ND	ND	0.683	0.612	ND	ND	2.44	5.79	2.90	7.99	8.99	1.79	5.54	ND	9.40	ND	ND	ND	2.68	ND	16.7	1.12	11.4
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	1.15	2.88	3.07	ND	4.46	0.863	0.891	ND	ND	2.28	4.57	2.75	7.99	9.05	1.81	5.97	ND	8.47	ND	ND	ND	2.69	0.464	16.4	1.11	9.93
North SD Bay	Northern Anchovy	Forage - Planktivore	DUP-C1_91203SDNBBOG18NAC	1.20	2.93	2.96	ND	ND	0.807	0.623	ND	ND	2.38	5.11	2.89	7.83	7.46	2.08	6.13	ND	10.1	ND	ND	ND	3.01	ND	21.0	1.55	12.1
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	ND	1.07	0.836	ND	0.97	0.285	0.428	ND	ND	1.27	1.38	0.898	3.09	3.95	0.538	1.94	ND	3.02	ND	ND	ND	ND	ND	6.18	0.433	3.79
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	ND	0.732	0.809	ND	ND	ND	ND	ND	ND	1.47	1.68	0.827	2.94	3.17	0.417	1.65	ND	2.96	ND	ND	ND	ND	ND	5.74	ND	3.51
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	ND	1.04	1.01	ND	1.14	0.383	0.325	ND	ND	0.839	1.43	0.874	2.89	3.15	0.547	1.55	ND	2.86	ND	ND	ND	ND	ND	4.90	0.376	2.92
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	ND	ND	ND	ND	0.486	ND	ND	ND	ND	0.602	ND	ND	1.16	ND	ND	ND	ND	2.36	ND	ND	ND	0.796	ND	3.62	ND	0.184
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.646	ND	ND	1.28	0.505	0.692	0.604	ND	2.50	ND	ND	ND	0.798	ND	3.38	ND	0.509
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	0.986	2.60	2.42	ND	2.87	1.85	1.57	ND	ND	2.09	2.55	1.62	7.24	7.71	2.22	3.12	ND	8.66	ND	ND	ND	2.32	0.537	15.9	0.928	3.52
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	1.17	2.58	2.65	0.895	4.33	1.93	1.46	ND	ND	2.98	4.30	3.04	8.23	9.46	1.98	5.74	ND	11.2	ND	ND	ND	3.45	ND	20.0	1.15	8.72
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	ND	ND	ND	ND	0.588	ND	ND	ND	ND	0.489	ND	ND	2.13	1.81	0.480	0.479	ND	2.38	ND	ND	ND	0.591	ND	4.01	ND	1.11
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	ND	0.347	ND	ND	ND	ND	ND	ND	ND	0.597	ND	ND	2.04	1.45	0.598	ND	ND	2.58	ND	ND	ND	0.912	ND	4.79	ND	0.519
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.08	0.773	0.362	ND	ND	1.51	ND	ND	ND	ND	ND	2.34	ND	0.402
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	ND	0.388	0.444	ND	0.846	ND	ND	ND	ND	0.589	0.429	ND	2.33	1.79	0.42	0.312	ND	2.34	ND	ND	ND	0.912	ND	5.39	ND	1.76
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	ND	0.832	0.779	ND	1.13	ND	ND	ND	ND	0.979	1.42	1.14	3.94	4.85	0.823	2.21	ND	3.68	ND	ND	ND	1.23	ND	10.4	0.605	3.82
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.424	ND	ND	1.04	ND	ND	ND	ND	0.985	ND	ND	ND	ND	ND	1.90	ND	ND
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	ND	4.98	5.85	ND	ND	ND	ND	ND	ND	2.98	7.82	3.95	10.7	14.6	2.57	8.39	ND	11.5	ND	ND	ND	4.21	ND	24.7	1.98	15.2
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	1.14	3.83	3.87	ND	ND	ND	ND	ND	ND	2.41	5.59	3.08	8.47	10.5	2.08	6.32	ND	10.0	ND	ND	ND	3.25	ND	19.1	1.41	11.2
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	ND	ND	ND	ND	0.624	ND	ND	ND	ND	0.406	ND	ND	1.57	0.243	0.716	0.340	ND	2.58	ND	ND	ND	ND	ND	4.28	ND	0.268
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	ND	0.216	ND	ND	0.520	ND	ND	ND	ND	0.405	ND	ND	0.979	0.281	0.477	0.350	ND	1.97	ND	ND	ND	0.510	ND	3.38	ND	0.286
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	0.777	2.65	2.73	ND	5.12	1.60	1.78	ND	ND	2.72	4.33	4.20	11.40	13.5	2.72	6.26	ND	12.7	ND	ND	ND	3.95	ND	29	1.60	13.5
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	0.883	2.31	2.96	ND	4.25	1.26	1.07	ND	ND	2.75	4.02	3.46	9.79	12.6	2.26	6.16	ND	12.1	ND	ND	ND	3.91	ND	26.5	1.43	13.0
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	0.753	2.71	2.62	ND	4.65	1.57	1.01	ND	ND	2.79	5.00	3.28	11.20	12.6	2.19	6.27	ND	12.4	ND	ND	ND	3.88	ND	28.2	1.32	13.0
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	ND	0.47	ND	ND	ND	ND	ND	ND	ND	0.722	ND	ND	2.48	1.25	0.582	ND	ND	2.66	ND	ND	ND	0.760	ND	4.36	ND	0.576
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.89	1.08	ND	ND	ND	1.73	ND	ND	ND	0.494	ND	3.19	ND	0.454
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.74	1.18	ND	ND	ND	1.96	ND	ND	ND	0.489	ND	2.89	ND	0.519
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	ND	0.599	0.625	ND	1.07	ND	ND	ND	ND	0.654	0.703	0.599	2.08	1.99	ND	1.13	ND	2.14	ND	ND	ND	0.691	ND	4.15	ND	1.93

Notes:

[a] - Tissue for composites combined from RHMP, BOG, and DOS programs. SD Bay ecoregions (North/South) follow BOG protocols for creation of composites for analysis.

Italicized values represent 1/2 of the highest value MDL for all associated congeners of the summed analyte.

MDL = Method Detection Limit; NA = Not Applicable; ND = Not Detected (<MDL); RL = Reporting Limit

J-flags (result between the MDL and the RL) are reported as whole values.

Appendix Table B-1. Tissue Chemistry Summary Table

Harbor	Species	Feeding Guild	Composite ID	PCB-151	PCB-153	PCB-156	PCB-157	PCB-158	PCB-167	PCB-168+132	PCB-169	PCB-170	PCB-174	PCB-177	PCB-180	PCB-183	PCB-187	PCB-189	PCB-194	PCB-195	PCB-199 (200)	PCB-201	PCB-203	PCB-206	PCB-209	Total PCBs[5]	Arsenic	Mercury	Selenium
			MDL	*0.073*	*0.065*	*0.089*	*0.10*	*0.074*	*0.049*	*0.094*	*0.12*	*0.12*	*0.25*	*0.085*	*0.15*	*0.056*	*0.17*	*0.11*	*0.16*	*0.093*	*0.250*	*0.10*	*0.25*	*0.16*	*0.25*	*NA*	*0.025*	*0.01*	*0.025*
			RL	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*0.5*	*NA*	*0.05*	*0.02*	*0.05*
			Units	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ng/g ww*	*ug/g ww*	*ng/g ww*	*ug/g ww*
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.102	2.75	ND	ND	0.482	ND	ND	ND	ND	ND	ND	1.57	0.419	1.15	ND	ND	ND	ND	ND	ND	ND	ND	11.7	2.27	80.7	0.394
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	ND	0.544	ND	ND	0.409	ND	ND	ND	ND	ND	ND	ND	ND	0.491	ND	ND	ND	ND	ND	ND	ND	ND	4.08	1.25	13.6	0.187
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	ND	1.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.87	0.414	75.9	0.302
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	0.180	2.18	0.260	ND	0.445	ND	ND	ND	ND	ND	ND	1.55	0.339	0.883	ND	ND	ND	ND	ND	ND	ND	ND	13.8	1.25	18.6	0.240
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.112	2.93	0.357	ND	0.456	0.234	ND	ND	ND	ND	ND	1.54	0.436	0.933	ND	ND	ND	ND	ND	ND	ND	ND	15.6	1.16	50.6	0.393
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	ND	0.522	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.56	0.374	123	0.153
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	*0.25*	0.342	120	0.148
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.39	0.409	111	0.161
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	ND	0.212	ND	ND	0.337	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.62	1.39	17.7	0.190
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	ND	1.46	ND	ND	0.192	ND	ND	ND	ND	ND	ND	0.357	0.121	0.404	ND	ND	ND	ND	ND	ND	ND	ND	7.99	0.656	83.1	0.268
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	0.175	1.63	ND	ND	0.385	0.153	ND	ND	ND	ND	ND	0.559	0.15	0.53	ND	ND	ND	ND	ND	ND	ND	ND	10.7	4.16	92.2	0.311
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	0.191	2.60	ND	ND	0.247	0.255	0.256	ND	ND	ND	ND	0.807	0.329	0.961	ND	ND	ND	ND	ND	ND	ND	ND	17.5	1.20	112	0.322
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	ND	1.47	ND	ND	0.259	0.143	ND	ND	ND	ND	ND	ND	0.18	0.435	ND	ND	ND	ND	ND	ND	ND	ND	7.59	0.766	34.3	0.197
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	0.836	4.50	ND	ND	0.459	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24.9	0.733	16.5	0.193
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	ND	0.217	ND	ND	0.193	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.45	1.29	22.6	0.285
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	ND	0.284	ND	ND	0.316	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.29	1.78	11.5	0.191
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	ND	ND	ND	ND	0.189	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.86	1.22	12.0	0.212
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	0.214	2.91	ND	ND	0.468	ND	ND	ND	ND	ND	ND	1.23	0.436	1.14	ND	ND	ND	ND	ND	ND	ND	ND	17.8	0.606	86.6	0.254
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.111	1.42	ND	ND	0.286	ND	0.175	ND	ND	ND	ND	ND	ND	0.493	ND	ND	ND	ND	ND	ND	ND	ND	7.14	0.965	120	0.259
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	ND	1.30	ND	ND	0.304	ND	ND	ND	ND	ND	ND	ND	ND	0.516	ND	ND	ND	ND	ND	ND	ND	ND	6.53	1.42	93.4	0.256
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	ND	0.63	ND	ND	0.342	ND	ND	ND	ND	ND	ND	ND	ND	0.304	ND	ND	ND	ND	ND	ND	ND	ND	4.18	0.815	30.5	0.175
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	ND	1.68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.267	0.761	ND	ND	ND	ND	ND	ND	ND	ND	9.76	0.781	179	0.344
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.104	2.26	ND	ND	0.278	ND	ND	ND	ND	ND	ND	ND	0.172	0.761	ND	ND	ND	ND	ND	ND	ND	ND	10.7	0.538	115	0.200
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	ND	0.484	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.19	0.551	23.1	0.161
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	ND	4.50	ND	ND	0.470	ND	ND	ND	ND	ND	ND	1.43	0.574	1.49	ND	ND	ND	ND	ND	ND	ND	ND	16.2	10.3	566	0.175
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.313	5.08	ND	ND	0.364	0.183	ND	ND	ND	ND	ND	ND	ND	1.62	ND	ND	ND	ND	ND	ND	ND	ND	26.9	14.0	49.7	0.259
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	ND	1.84	ND	ND	0.242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.34	6.19	92.6	0.456
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	ND	2.02	ND	ND	0.269	ND	ND	ND	ND	ND	ND	ND	ND	0.838	ND	ND	ND	ND	ND	ND	ND	ND	9.05	1.30	237	0.220
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	0.273	2.85	ND	ND	0.336	ND	ND	ND	ND	ND	ND	ND	ND	0.868	ND	ND	ND	ND	ND	ND	ND	ND	17.0	0.787	16.9	0.199
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	ND	0.534	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53	0.793	58.8	0.324
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	ND	0.435	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.44	0.685	33.7	0.261
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	ND	0.883	ND	ND	0.236	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.02	0.656	42.6	0.248
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	ND	1.68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.318	ND	ND	ND	ND	ND	ND	ND	ND	4.43	0.610	82.5	0.205
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	ND	0.979	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.34	0.570	54.1	0.190
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.330	2.28	ND	ND	0.185	ND	0.101	ND	ND	ND	ND	ND	ND	0.808	ND	ND	ND	ND	ND	ND	ND	ND	11.2	0.775	184	0.277
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.216	2.34	ND	ND	0.294	ND	ND	ND	ND	ND	ND	ND	ND	1.10	ND	ND	ND	ND	ND	ND	ND	ND	11.8	0.768	101	0.297
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.185	2.02	ND	ND	0.397	ND	ND	ND	0.413	ND	ND	0.578	0.236	0.806	ND	ND	ND	ND	ND	ND	ND	ND	71.6	0.679	84.1	0.280
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.409	5.98	ND	ND	0.452	ND	ND	ND	ND	ND	ND	1.17	0.598	1.99	ND	ND	ND	ND	ND	ND	ND	ND	27.5	0.772	94.4	0.287
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.514	5.21	ND	ND	0.428	ND	0.150	ND	ND	ND	ND	1.33	ND	2.20	ND	ND	ND	ND	ND	ND	ND	ND	27.9	1.08	94.5	0.296
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	DUP-C2_91203SDNBBOG18BSB	0.439	5.72	0.416	ND	0.455	0.295	ND	ND	1.20	ND	ND	1.73	0.639	2.32	ND	ND	ND	ND	ND	0.445	ND	ND	33.4	1.37	95.9	0.342
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	ND	2.12	ND	ND	0.158	ND	ND	ND	ND	ND	ND	ND	ND	0.949	ND	ND	ND	ND	ND	ND	ND	ND	8.40	0.798	223	0.235
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.661	4.38	ND	ND	0.380	ND	0.194	ND	ND	ND	ND	1.42	0.555	1.64	ND	ND	ND	ND	ND	ND	ND	ND	27.8	1.08	54.1	0.154
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.632	5.59	ND	ND	0.220	0.218	ND	ND	ND	0.509	0.458	1.24	0.400	1.93	ND	ND	ND	ND	ND	ND	ND	ND	30.0	0.688	74.9	0.330
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	2.39	20.4	0.633	ND	0.978	0.534	ND	ND	2.59	1.43	1.73	4.33	1.93	7.06	ND	ND	ND	1.03	ND	0.707	ND	ND	110	0.509	98.5	0.360
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	1.51	11.8	0.366	ND	0.465	0.359	ND	ND	1.58	0.776	1.14	2.56	0.779	3.72	ND	ND	ND	ND	ND	ND	ND	ND	66.5	2.57	80.9	0.400
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	0.413	4.86	ND	ND	0.466	ND	ND	ND	ND	ND	ND	0.893	0.333	1.39	ND	ND	ND	ND	ND	ND	ND	ND	22.2	1.10	92.3	0.304
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	0.318	4.13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.25	ND	ND	ND	ND	ND	ND	ND	ND	16.5	1.59	81.0	0.331
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	0.294	4.09	ND	ND	0.351	ND	ND	ND	ND	ND	ND	1.03	0.4	1.78	ND	ND	ND	ND	ND	ND	ND	ND	19.8	1.47	82.6	0.321
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	ND	6.93	ND	ND	0.384	ND	ND	ND	1.15	ND	ND	1.56	0.694	1.62	ND	ND	ND	0.536	ND	ND	ND	ND	23.0	6.98	2026	0.194
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	3.65	20.8	1.04	ND	1.02	0.939	1.87	ND	4.05	2.16	3.12	5.05	2.38	7.95	ND	ND	ND	1.56	ND	1.68	1.72	0.641	145	2.73	19.1	0.313
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	3.48	17.9	0.821	ND	1.14	0.806	1.41	ND	2.63	1.69	2.18	4.79	1.49	6.58	ND	ND	ND	ND	ND	ND	ND	ND	132	1.71	15.7	0.263
North SD Bay	Northern Anchovy	Forage - Planktivore	DUP-C1_91203SDNBBOG18NAC	3.62	26.1	1.16	0.312	1.07	1.08	1.40	ND	5.08	2.34	2.94	6.48	2.77	9.66	ND	2.25	ND	2.20	0.47	1.61	2.71	ND	163	2.31	16.0	0.252
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	1.03	7.95	0.311	ND	0.484	ND	0.661	ND	ND	ND	1.10	1.87	ND	3.10	ND	ND	ND	ND	ND	ND	ND	ND	46.6	0.877	193	0.171
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	1.32	7.60	0.448	ND	0.484	ND	0.551	ND	ND	0.897	1.13	2.70	0.896	2.59	ND	ND	ND	ND	ND	ND	ND	ND	44.5	1.13	155	0.164
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	0.973	6.41	0.288	ND	0.427	ND	0.511	ND	1.37	0.567	1.02	1.78	0.73	2.57	ND	ND	ND	ND	ND	ND	ND	ND	42.9	1.04	97.8	0.176
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	ND	8.88	0.478	ND	0.429	0.522	ND	ND	3.07	ND	ND	5.09	1.24	1.46	ND	2.08	ND	ND	ND	1.82	ND	0.862	35.1	8.06	368	0.595
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	ND	6.02	0.439	ND	0.442	0.457	ND	ND	1.44	ND	ND	3.12	0.943	1.37	ND	1.02	ND	ND	ND	ND	ND	0.340	26.5	3.90	190	0.460
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	2.19	17.9	1.05	0.229	1.32	0.737	1.37	ND	2.91	ND	1.71	3.69	2.03	5.78	ND	ND	ND	0.835	ND	ND	ND	ND	112	0.936	38.0	0.176
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	3.14	24.4	1.20	0.291	1.27	0.792	1.62	ND	3.25	2.00	3.28	6.00	2.06	7.84	ND	1.25	ND	1.34	ND	0.860	ND	ND	156	1.20	56.7	0.275
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	ND	6.82	ND	ND	0.411	ND	ND	ND	1.64	ND	ND	1.17	0.681	1.96	ND	ND	ND	ND	ND	ND	ND	ND	26.7	0.412	262	0.351
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	ND	7.68	ND	ND	0.429	ND	ND	ND	1.21	ND	ND	1.48	0.862	2.34	ND	ND	ND	ND	ND	ND	ND	ND	27.8	0.617	193	0.313
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	ND	3.22	ND	ND	0.247	ND	ND	ND	ND	ND	ND	ND	0.371	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.3	0.549	164	0.322
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.482	8.34	ND	ND	0.330	0.324	ND	ND	0.892	ND	ND	1.95	0.69	3.26	ND	ND	ND	0.534	ND	ND	ND	0.275	35.0	0.523	472	0.472
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	1.7	13.2	0.283	ND	0.574	0.268	0.746	ND	1.65	0.818	1.11	2.14	1.04	4.49	ND	ND	ND	0.777	ND	ND	ND	ND	66.6	0.768	164	0.419
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	ND	2.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.87	11.6	1068	0.185
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	4.29	33.3	ND	ND	1.38	1.44	1.27	ND	2.95	3.23	3.61	5.96	2.19	10.7	ND	ND	ND	ND	ND	ND	ND	ND	190	2.48	19.9	0.350
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	3.18	25.2	ND	ND	1.38	0.895	0.514	ND	3.82	2.02	2.49	4.11	2.38	8.39	ND	ND	ND	1.47	ND	0.818	ND	ND	149	2.52	17.6	0.395
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	ND	8.60	ND	ND	0.274	ND	ND	ND	1.47	ND	ND	2.84	1.09	1.60	ND	ND	ND	0.794	ND	0.783	ND	ND	28.5	10.1	274	0.597
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	ND	7.07	0.321	ND	0.386	0.371	ND	ND	1.20	ND	ND	2.42	0.987	1.49	ND	ND	ND	ND	ND	ND	ND	ND	23.6	10.1	276	0.627
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	3.81	34.3	1.30	ND	1.52	1.41	1.26	ND	4.13	3.05	4.08	7.63	3.40	11.4	ND	1.35	ND	2	0.332	1.30	ND	ND	203	1.13	56.5	0.368
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	3.58	35.5	1.03	ND	1.45	1.01	39.7	ND	3.84	2.33	3.11	5.42	2.21	12.0	ND	0.722	ND	1.71	0.324	1.00	ND	ND	226	1.06	58.8	0.358
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	4.07	36.7	0.952	0.402	1.45	0.826	1.53	ND	3.72	2.20	3.70	5.52	2.62	11.5	ND	ND	ND	1.92	0.351	0.862	ND	ND	194	1.05	62.0	0.416
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.143	8.65	0.368	ND	0.274	0.153	ND	ND	1.32	ND	ND	1.35	0.627	2.76	ND	ND	ND	ND	ND	ND	ND	ND	29.5	0.544	164	0.418
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	ND	8.07	ND	ND	0.204	0.108	ND	ND	ND	ND	ND	1.62	0.718	2.03	ND	ND	ND	ND	ND	ND	ND	ND	21.6	0.353	277	0.473
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	ND	6.38	ND	ND	0.249	0.183	ND	ND	ND	ND	ND	1.22	0.673	1.92	ND	ND	ND	ND	ND	ND	ND	ND	19.4	0.466	205	0.491
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	0.55	4.90	ND	ND	0.239	ND	ND	ND	1.20	ND	0.612	1.01	0.610	2.27	ND	ND	ND	ND	ND	ND	ND	ND	29.8	1.25	116	0.250

Notes:

[a] - Tissue for composites combined from RHMP, BOG, and DOS programs. SD Bay ecoregions (North/South) follow BOG protocols for creation of composites for analysis.

Italicized values represent 1/2 of the highest value MDL for all associated congeners of the summed analyte.

MDL = Method Detection Limit; NA = Not Applicable; ND = Not Detected (<MDL); RL = Reporting Limit

J-flags (result between the MDL and the RL) are reported as whole values.

5 = Total PCBs includes the sum of congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209. Note that this list is a subset of the total 209 PCB congeners.

BSAF Summary Tables

Appendix Table B-2. Biota-Sediment Accumulation Factors for Total Chlordanes[a]

Harbor	Species	Feeding Guild	Composite ID	Total Chlordanes Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total Chlordanes Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total Chlordanes Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total Chlordanes Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.228	0.627	36.4	0.546	1.70	32.2	0.42	1.13
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	0.125	0.877	14.3	0.546	1.70	32.2	0.23	0.44
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	0.125	1.08	11.6	0.546	1.70	32.2	0.23	0.36
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	0.799	1.30	61.5	0.546	1.70	32.2	1.46	1.91
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.874	0.426	205	0.546	1.70	32.2	1.60	6.38
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.125	0.281	44.5	0.546	1.70	32.2	0.23	1.38
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.125	0.278	45.0	0.546	1.70	32.2	0.23	1.40
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.125	0.221	56.6	0.546	1.70	32.2	0.23	1.76
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	0.125	0.718	17.4	0.546	1.70	32.2	0.23	0.54
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.125	0.472	26.5	0.082	1.88	4.37	1.52	6.07
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	0.125	1.16	10.8	0.082	1.88	4.37	1.52	2.47
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	0.366	1.39	26.3	0.082	1.88	4.37	4.46	6.03
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.125	0.412	30.3	0.082	1.88	4.37	1.52	6.95
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	0.732	4.36	16.8	0.082	1.88	4.37	8.91	3.85
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	0.125	0.322	38.8	0.082	1.88	4.37	1.52	8.89
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	0.125	0.495	25.3	0.082	1.88	4.37	1.52	5.78
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.125	0.446	28.0	0.082	1.88	4.37	1.52	6.42
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	0.885	1.77	50.0	0.082	1.88	4.37	10.8	11.5
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.204	0.752	27.1	0.082	1.88	4.37	2.48	6.21
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	0.125	0.833	15.0	0.082	1.88	4.37	1.52	3.44
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.125	0.756	16.5	0.082	1.88	4.37	1.52	3.79
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.589	0.582	101	0.082	1.88	4.37	7.17	23.2
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.125	0.418	29.9	0.082	1.88	4.37	1.52	6.85
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.125	0.596	21.0	0.945	2.05	46.0	0.13	0.46
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	0.659	0.257	256	0.945	2.05	46.0	0.70	5.57
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.647	0.982	65.9	0.945	2.05	46.0	0.69	1.43
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.254	0.514	49.4	0.945	2.05	46.0	0.27	1.07
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	1.04	0.526	198	0.945	2.05	46.0	1.10	4.31
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	2.08	2.39	87.1	0.945	2.05	46.0	2.20	1.89
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.125	0.327	38.2	0.945	2.05	46.0	0.13	0.83
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.234	0.459	51.0	0.945	2.05	46.0	0.25	1.11
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.236	0.401	58.9	0.945	2.05	46.0	0.25	1.28
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.125	0.415	30.1	0.945	2.05	46.0	0.13	0.65
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.125	0.351	35.6	0.945	2.05	46.0	0.13	0.77
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.344	0.525	65.5	0.945	2.05	46.0	0.36	1.42
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.270	0.418	64.6	0.945	2.05	46.0	0.29	1.40
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.474	0.387	122	0.945	2.05	46.0	0.50	2.66

Notes:

a. Total Chlordanes includes the sum of alpha-chlordane, gamma-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total chlordanes) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-2. Biota-Sediment Accumulation Factors for Total Chlordanes[a]

Harbor	Species	Feeding Guild	Composite ID	Total Chlordanes Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total Chlordanes Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total Chlordanes Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total Chlordanes Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.285	0.385	74.0	2.69	0.987	272	0.11	0.27
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.220	0.382	57.6	2.69	0.987	272	0.08	0.21
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.125	0.243	51.4	2.69	0.987	272	0.05	0.19
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.125	0.435	28.7	2.69	0.987	272	0.05	0.11
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.125	0.235	53.2	2.69	0.987	272	0.05	0.20
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.777	0.329	236	2.69	0.987	272	0.29	0.87
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	0.566	0.310	183	2.69	0.987	272	0.21	0.67
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	0.125	1.23	10.2	2.69	0.987	272	0.05	0.04
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	0.201	1.52	13.2	2.69	0.987	272	0.07	0.05
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	0.213	0.999	21.3	2.69	0.987	272	0.08	0.08
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	0.125	0.212	59.0	2.69	0.987	272	0.05	0.22
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	2.77	2.86	96.8	2.69	0.987	272	1.03	0.36
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	2.41	1.29	187	2.69	0.987	272	0.90	0.69
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	0.361	0.468	77.1	2.69	0.987	272	0.13	0.28
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	0.201	0.614	32.7	2.69	0.987	272	0.07	0.12
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	0.320	0.764	41.9	2.69	0.987	272	0.12	0.15
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.125	0.459	27.2	2.69	0.987	272	0.05	0.10
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	0.125	0.210	59.5	2.69	0.987	272	0.05	0.22
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	2.19	4.90	44.6	2.69	0.987	272	0.81	0.16
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	2.91	1.35	215	2.69	0.987	272	1.08	0.79
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.125	0.200	62.5	2.69	0.987	272	0.05	0.23
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.125	0.275	45.5	2.69	0.987	272	0.05	0.17
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.125	0.160	78.1	2.69	0.987	272	0.05	0.29
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.125	0.284	44.0	1.70	1.16	146	0.07	0.30
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	0.125	0.180	69.4	1.70	1.16	146	0.07	0.47
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	0.125	0.155	80.6	1.70	1.16	146	0.07	0.55
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	3.45	2.91	119	1.70	1.16	146	2.03	0.81
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	2.82	2.09	135	1.70	1.16	146	1.66	0.92
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.125	0.492	25.4	1.70	1.16	146	0.07	0.17
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.125	0.505	24.8	1.70	1.16	146	0.07	0.17
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	1.62	1.37	118	1.70	1.16	146	0.95	0.81
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	1.81	1.32	137	1.70	1.16	146	1.07	0.94
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	1.94	1.36	142	1.70	1.16	146	1.14	0.97
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.125	0.259	48.3	1.70	1.16	146	0.07	0.33
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.125	0.199	62.8	1.70	1.16	146	0.07	0.43
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.125	0.264	47.3	1.70	1.16	146	0.07	0.32
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	0.125	0.657	19.0	1.70	1.16	146	0.07	0.13

Notes:

a. Total Chlordanes includes the sum of alpha-chlordane, gamma-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total chlordanes) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-3. Biota-Sediment Accumulation Factors for Total DDTs[a]

Harbor	Species	Feeding Guild	Composite ID	Total DDTs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total DDTs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total DDTs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total DDTs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	4.06	0.627	648	2.17	1.70	128	1.87	5.05
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	3.24	0.877	369	2.17	1.70	128	1.49	2.88
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	11.2	1.08	1037	2.17	1.70	128	5.15	8.09
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	11.6	1.30	892	2.17	1.70	128	5.34	6.96
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	1.96	0.426	460	2.17	1.70	128	0.90	3.59
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	3.13	0.281	1114	2.17	1.70	128	1.44	8.69
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	1.98	0.278	712	2.17	1.70	128	0.91	5.56
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	2.21	0.221	1000	2.17	1.70	128	1.02	7.80
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	1.98	0.718	276	2.17	1.70	128	0.91	2.15
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	4.66	0.472	987	2.03	1.88	108	2.30	9.15
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	10.9	1.16	940	2.03	1.88	108	5.37	8.71
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	15.1	1.39	1086	2.03	1.88	108	7.44	10.1
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	6.59	0.412	1600	2.03	1.88	108	3.25	14.8
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	28.0	4.36	642	2.03	1.88	108	13.8	5.95
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	2.02	0.322	627	2.03	1.88	108	1.00	5.82
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	2.14	0.495	432	2.03	1.88	108	1.05	4.01
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	1.83	0.446	410	2.03	1.88	108	0.90	3.80
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	18.7	1.77	1056	2.03	1.88	108	9.22	9.80
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	7.24	0.752	963	2.03	1.88	108	3.57	8.93
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	5.53	0.833	664	2.03	1.88	108	2.73	6.15
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	3.41	0.756	451	2.03	1.88	108	1.68	4.18
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	19.4	0.582	3333	2.03	1.88	108	9.56	31
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	5.66	0.418	1354	2.03	1.88	108	2.79	12.6
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.787	0.596	132	0.460	2.05	22.4	1.71	5.90
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	12.9	0.257	5019	0.460	2.05	22.4	28.1	224
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	3.11	0.982	317	0.460	2.05	22.4	6.76	14.1
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.134	0.514	26.0	0.460	2.05	22.4	0.29	1.16
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	3.86	0.526	734	0.460	2.05	22.4	8.40	32.8
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	4.42	2.39	185	0.460	2.05	22.4	9.61	8.26
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.439	0.327	134	0.460	2.05	22.4	0.95	5.99
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.716	0.459	156	0.460	2.05	22.4	1.56	6.96
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.508	0.401	127	0.460	2.05	22.4	1.10	5.66
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	1.39	0.415	335	0.460	2.05	22.4	3.02	15.0
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	1.22	0.351	348	0.460	2.05	22.4	2.65	15.5
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	3.93	0.525	749	0.460	2.05	22.4	8.55	33.4
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	2.66	0.418	636	0.460	2.05	22.4	5.79	28.4
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	3.44	0.387	889	0.460	2.05	22.4	7.48	39.7

Notes:

a. Total detectable DDTs includes the sum of 2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, 2,4'-DDT, and 4,4'-DDT.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total DDTs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-3. Biota-Sediment Accumulation Factors for Total DDTs[a]

Harbor	Species	Feeding Guild	Composite ID	Total DDTs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total DDTs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total DDTs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total DDTs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	1.73	0.385	449	2.25	0.987	227	0.77	1.98
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	1.91	0.382	500	2.25	0.987	227	0.85	2.20
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	1.83	0.243	753	2.25	0.987	227	0.81	3.31
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	4.02	0.435	924	2.25	0.987	227	1.79	4.06
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	3.50	0.235	1489	2.25	0.987	227	1.56	6.55
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	6.80	0.329	2067	2.25	0.987	227	3.03	9.09
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	6.14	0.310	1981	2.25	0.987	227	2.73	8.71
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	8.09	1.23	658	2.25	0.987	227	3.60	2.89
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	10.5	1.52	691	2.25	0.987	227	4.68	3.04
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	7.22	0.999	723	2.25	0.987	227	3.22	3.18
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	4.32	0.212	2038	2.25	0.987	227	1.92	8.96
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	4.94	2.86	173	2.25	0.987	227	2.20	0.76
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	4.58	1.29	355	2.25	0.987	227	2.04	1.56
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	7.46	0.468	1594	2.25	0.987	227	3.32	7.00
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	2.63	0.614	428	2.25	0.987	227	1.17	1.88
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	2.84	0.764	372	2.25	0.987	227	1.26	1.63
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.134	0.459	29.1	2.25	0.987	227	0.06	0.13
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	0.134	0.210	63.6	2.25	0.987	227	0.06	0.28
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	12.8	4.90	262	2.25	0.987	227	5.71	1.15
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	6.45	1.35	478	2.25	0.987	227	2.87	2.10
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	2.38	0.200	1190	2.25	0.987	227	1.06	5.23
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.362	0.275	132	2.25	0.987	227	0.16	0.58
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.538	0.160	336	2.25	0.987	227	0.24	1.48
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	1.36	0.284	479	5.28	1.16	456	0.26	1.05
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	3.59	0.180	1994	5.28	1.16	456	0.68	4.38
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	2.83	0.155	1826	5.28	1.16	456	0.54	4.01
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	12.2	2.91	419	5.28	1.16	456	2.31	0.92
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	7.93	2.09	379	5.28	1.16	456	1.50	0.83
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.134	0.492	27.1	5.28	1.16	456	0.03	0.06
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.134	0.505	26.4	5.28	1.16	456	0.03	0.06
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	8.81	1.37	643	5.28	1.16	456	1.67	1.41
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	8.70	1.32	659	5.28	1.16	456	1.65	1.45
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	8.78	1.36	646	5.28	1.16	456	1.66	1.42
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	1.04	0.259	402	5.28	1.16	456	0.20	0.88
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.818	0.199	411	5.28	1.16	456	0.15	0.90
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.881	0.264	334	5.28	1.16	456	0.17	0.73
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	3.27	0.657	498	5.28	1.16	456	0.62	1.09

Notes:

a. Total detectable DDTs includes the sum of 2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, 2,4'-DDT, and 4,4'-DDT.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total DDTs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-4. Biota-Sediment Accumulation Factors for Dieldrin

Harbor	Species	Feeding Guild	Composite ID	Total Dieldrin Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total Dieldrin Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[a] Total Dieldrin Sediment Conc. (ng/g dw)	Average[a] Sediment TOC Conc. (%)	Total Dieldrin Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.050	0.627	7.97	0.038	1.70	2.21	1.33	3.61
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	0.050	0.877	5.70	0.038	1.70	2.21	1.33	2.58
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	0.050	1.08	4.63	0.038	1.70	2.21	1.33	2.09
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	0.050	1.30	3.85	0.038	1.70	2.21	1.33	1.74
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.050	0.426	11.7	0.038	1.70	2.21	1.33	5.31
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.050	0.281	17.8	0.038	1.70	2.21	1.33	8.05
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.050	0.278	18.0	0.038	1.70	2.21	1.33	8.14
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.050	0.221	22.6	0.038	1.70	2.21	1.33	10.2
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	0.050	0.718	6.96	0.038	1.70	2.21	1.33	3.15
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.050	0.472	10.6	0.039	1.88	2.09	1.27	5.07
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	0.050	1.16	4.31	0.039	1.88	2.09	1.27	2.06
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	0.050	1.39	3.60	0.039	1.88	2.09	1.27	1.72
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.050	0.412	12.1	0.039	1.88	2.09	1.27	5.81
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	0.050	4.36	1.15	0.039	1.88	2.09	1.27	0.55
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	0.050	0.322	15.5	0.039	1.88	2.09	1.27	7.44
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	0.050	0.495	10.1	0.039	1.88	2.09	1.27	4.84
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.050	0.446	11.2	0.039	1.88	2.09	1.27	5.37
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	0.050	1.77	2.82	0.039	1.88	2.09	1.27	1.35
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.050	0.752	6.65	0.039	1.88	2.09	1.27	3.18
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	0.050	0.833	6.00	0.039	1.88	2.09	1.27	2.87
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.050	0.756	6.61	0.039	1.88	2.09	1.27	3.17
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.050	0.582	8.59	0.039	1.88	2.09	1.27	4.11
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.050	0.418	12.0	0.039	1.88	2.09	1.27	5.73
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.050	0.596	8.39	0.038	2.05	1.83	1.33	4.59
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	0.050	0.257	19.5	0.038	2.05	1.83	1.33	10.6
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.050	0.982	5.09	0.038	2.05	1.83	1.33	2.79
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.050	0.514	9.73	0.038	2.05	1.83	1.33	5.32
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	0.050	0.526	9.51	0.038	2.05	1.83	1.33	5.20
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	0.050	2.39	2.09	0.038	2.05	1.83	1.33	1.15
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.050	0.327	15.3	0.038	2.05	1.83	1.33	8.37
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.050	0.459	10.9	0.038	2.05	1.83	1.33	5.96
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.050	0.401	12.5	0.038	2.05	1.83	1.33	6.83
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.050	0.415	12.0	0.038	2.05	1.83	1.33	6.60
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.050	0.351	14.2	0.038	2.05	1.83	1.33	7.80
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.050	0.525	9.52	0.038	2.05	1.83	1.33	5.21
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.050	0.418	12.0	0.038	2.05	1.83	1.33	6.55
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.050	0.387	12.9	0.038	2.05	1.83	1.33	7.07

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

Dieldrin was not detected in any sediment or tissue samples. 1/2 of the MDL was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-4. Biota-Sediment Accumulation Factors for Dieldrin

Harbor	Species	Feeding Guild	Composite ID	Total Dieldrin Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total Dieldrin Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[a] Total Dieldrin Sediment Conc. (ng/g dw)	Average[a] Sediment TOC Conc. (%)	Total Dieldrin Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.050	0.385	13.0	0.036	0.987	3.63	1.40	3.58
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.050	0.382	13.1	0.036	0.987	3.63	1.40	3.61
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.050	0.243	20.6	0.036	0.987	3.63	1.40	5.67
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.050	0.435	11.5	0.036	0.987	3.63	1.40	3.17
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.050	0.235	21.3	0.036	0.987	3.63	1.40	5.86
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.050	0.329	15.2	0.036	0.987	3.63	1.40	4.19
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	0.050	0.310	16.1	0.036	0.987	3.63	1.40	4.45
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	0.050	1.23	4.07	0.036	0.987	3.63	1.40	1.12
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	0.050	1.52	3.29	0.036	0.987	3.63	1.40	0.91
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	0.050	0.999	5.01	0.036	0.987	3.63	1.40	1.38
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	0.050	0.212	23.6	0.036	0.987	3.63	1.40	6.50
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	0.050	2.86	1.75	0.036	0.987	3.63	1.40	0.48
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	0.050	1.29	3.88	0.036	0.987	3.63	1.40	1.07
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	0.050	0.468	10.7	0.036	0.987	3.63	1.40	2.94
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	0.050	0.614	8.14	0.036	0.987	3.63	1.40	2.24
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	0.050	0.764	6.54	0.036	0.987	3.63	1.40	1.80
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.050	0.459	10.9	0.036	0.987	3.63	1.40	3.00
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	0.050	0.210	23.8	0.036	0.987	3.63	1.40	6.56
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	0.050	4.90	1.02	0.036	0.987	3.63	1.40	0.28
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	0.050	1.35	3.70	0.036	0.987	3.63	1.40	1.02
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.050	0.200	25.0	0.036	0.987	3.63	1.40	6.89
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.050	0.275	18.2	0.036	0.987	3.63	1.40	5.01
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.050	0.160	31.3	0.036	0.987	3.63	1.40	8.61
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.050	0.284	17.6	0.038	1.16	3.31	1.30	5.32
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	0.050	0.180	27.8	0.038	1.16	3.31	1.30	8.40
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	0.050	0.155	32.3	0.038	1.16	3.31	1.30	9.75
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	0.050	2.91	1.72	0.038	1.16	3.31	1.30	0.52
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	0.050	2.09	2.39	0.038	1.16	3.31	1.30	0.72
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.050	0.492	10.2	0.038	1.16	3.31	1.30	3.07
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.050	0.505	9.90	0.038	1.16	3.31	1.30	2.99
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	0.050	1.37	3.65	0.038	1.16	3.31	1.30	1.10
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	0.050	1.32	3.79	0.038	1.16	3.31	1.30	1.14
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	0.050	1.36	3.68	0.038	1.16	3.31	1.30	1.11
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.050	0.259	19.3	0.038	1.16	3.31	1.30	5.84
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.050	0.199	25.1	0.038	1.16	3.31	1.30	7.59
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.050	0.264	18.9	0.038	1.16	3.31	1.30	5.72
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	0.050	0.657	7.61	0.038	1.16	3.31	1.30	2.30

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

Dieldrin was not detected in any sediment or tissue samples. 1/2 of the MDL was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-5. Biota-Sediment Accumulation Factors for Total PAHs[a]

Harbor	Species	Feeding Guild	Composite ID	Total PAHs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total PAHs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total PAHs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total PAHs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.50	0.627	79.7	349	1.70	20595	0.0014	0.0039
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	0.50	0.877	57.0	349	1.70	20595	0.0014	0.0028
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	0.50	1.08	46.3	349	1.70	20595	0.0014	0.0022
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	0.50	1.30	38.5	349	1.70	20595	0.0014	0.0019
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.50	0.426	117	349	1.70	20595	0.0014	0.0057
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.50	0.281	178	349	1.70	20595	0.0014	0.0086
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.50	0.278	180	349	1.70	20595	0.0014	0.0087
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.50	0.221	226	349	1.70	20595	0.0014	0.0110
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	0.50	0.718	69.6	349	1.70	20595	0.0014	0.0034
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.50	0.472	106	181	1.88	9628	0.0028	0.0110
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	0.50	1.16	43.1	181	1.88	9628	0.0028	0.0045
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	0.50	1.39	36.0	181	1.88	9628	0.0028	0.0037
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.50	0.412	121	181	1.88	9628	0.0028	0.0126
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	0.50	4.36	11.5	181	1.88	9628	0.0028	0.0012
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	0.50	0.322	155	181	1.88	9628	0.0028	0.0161
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	0.50	0.495	101	181	1.88	9628	0.0028	0.0105
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.50	0.446	112	181	1.88	9628	0.0028	0.0116
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	0.50	1.77	28.2	181	1.88	9628	0.0028	0.0029
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.50	0.752	66.5	181	1.88	9628	0.0028	0.0069
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	0.50	0.833	60.0	181	1.88	9628	0.0028	0.0062
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.50	0.756	66.1	181	1.88	9628	0.0028	0.0069
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.50	0.582	85.9	181	1.88	9628	0.0028	0.0089
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.50	0.418	120	181	1.88	9628	0.0028	0.0124
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.50	0.596	83.9	286	2.05	13929	0.0017	0.0060
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	0.50	0.257	195	286	2.05	13929	0.0017	0.0140
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.50	0.982	50.9	286	2.05	13929	0.0017	0.0037
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.50	0.514	97.3	286	2.05	13929	0.0017	0.0070
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	0.50	0.526	95.1	286	2.05	13929	0.0017	0.0068
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	0.50	2.39	20.9	286	2.05	13929	0.0017	0.0015
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.50	0.327	153	286	2.05	13929	0.0017	0.0110
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.50	0.459	109	286	2.05	13929	0.0017	0.0078
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.50	0.401	125	286	2.05	13929	0.0017	0.0090
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.50	0.415	120	286	2.05	13929	0.0017	0.0086
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.50	0.351	142	286	2.05	13929	0.0017	0.0102
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.50	0.525	95.2	286	2.05	13929	0.0017	0.0068
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.50	0.418	120	286	2.05	13929	0.0017	0.0086
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.50	0.387	129	286	2.05	13929	0.0017	0.0093

Notes:

a. Total PAHs includes the sum of acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnapthalene, 2-methylnapthalene, 1-methylphenanthrene, and 1,6,7-trimethylnaphthalene.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

PAHs were not detected in any tissue samples. If all components of the summed analyte (total PAHs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-5. Biota-Sediment Accumulation Factors for Total PAHs[a]

Harbor	Species	Feeding Guild	Composite ID	Total PAHs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total PAHs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total PAHs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total PAHs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.50	0.385	130	1449	0.987	146754	0.0003	0.0009
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.50	0.382	131	1449	0.987	146754	0.0003	0.0009
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.50	0.243	206	1449	0.987	146754	0.0003	0.0014
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.50	0.435	115	1449	0.987	146754	0.0003	0.0008
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.50	0.235	213	1449	0.987	146754	0.0003	0.0014
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.50	0.329	152	1449	0.987	146754	0.0003	0.0010
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	0.50	0.310	161	1449	0.987	146754	0.0003	0.0011
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	0.50	1.23	40.7	1449	0.987	146754	0.0003	0.0003
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	0.50	1.52	32.9	1449	0.987	146754	0.0003	0.0002
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	0.50	0.999	50.1	1449	0.987	146754	0.0003	0.0003
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	0.50	0.212	236	1449	0.987	146754	0.0003	0.0016
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	0.50	2.86	17.5	1449	0.987	146754	0.0003	0.0001
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	0.50	1.29	38.8	1449	0.987	146754	0.0003	0.0003
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	0.50	0.468	107	1449	0.987	146754	0.0003	0.0007
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	0.50	0.614	81.4	1449	0.987	146754	0.0003	0.0006
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	0.50	0.764	65.4	1449	0.987	146754	0.0003	0.0004
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.50	0.459	109	1449	0.987	146754	0.0003	0.0007
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	0.50	0.210	238	1449	0.987	146754	0.0003	0.0016
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	0.50	4.90	10.2	1449	0.987	146754	0.0003	0.0001
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	0.50	1.35	37.0	1449	0.987	146754	0.0003	0.0003
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.50	0.200	250	1449	0.987	146754	0.0003	0.0017
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.50	0.275	182	1449	0.987	146754	0.0003	0.0012
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.50	0.160	313	1449	0.987	146754	0.0003	0.0021
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.50	0.284	176	692	1.16	59685	0.0007	0.0029
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	0.50	0.180	278	692	1.16	59685	0.0007	0.0047
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	0.50	0.155	323	692	1.16	59685	0.0007	0.0054
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	0.50	2.91	17.2	692	1.16	59685	0.0007	0.0003
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	0.50	2.09	23.9	692	1.16	59685	0.0007	0.0004
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.50	0.492	102	692	1.16	59685	0.0007	0.0017
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.50	0.505	99.0	692	1.16	59685	0.0007	0.0017
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	0.50	1.37	36.5	692	1.16	59685	0.0007	0.0006
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	0.50	1.32	37.9	692	1.16	59685	0.0007	0.0006
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	0.50	1.36	36.8	692	1.16	59685	0.0007	0.0006
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.50	0.259	193	692	1.16	59685	0.0007	0.0032
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.50	0.199	251	692	1.16	59685	0.0007	0.0042
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.50	0.264	189	692	1.16	59685	0.0007	0.0032
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	0.50	0.657	76.1	692	1.16	59685	0.0007	0.0013

Notes:

a. Total PAHs includes the sum of acenaphthene, acenaphthylene, anthracene, benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[e]pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, biphenyl, chrysene, dibenz[a,h]anthracene, dibenzothiophene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, perylene, phenanthrene, pyrene, 2,6-dimethylnaphthalene, 1-methylnapthalene, 2-methylnapthalene, 1-methylphenanthrene, and 1,6,7-trimethylnaphthalene.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

PAHs were not detected in any tissue samples. If all components of the summed analyte (total PAHs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-6. Biota-Sediment Accumulation Factors for Total PBDEs[a]

Harbor	Species	Feeding Guild	Composite ID	Total PBDEs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total PBDEs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total PBDEs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total PBDEs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.025	0.627	3.99	10.8	1.70	635	0.002	0.01
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	0.569	0.877	64.9	10.8	1.70	635	0.05	0.10
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	1.41	1.08	131	10.8	1.70	635	0.13	0.21
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	1.91	1.30	147	10.8	1.70	635	0.18	0.23
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.025	0.426	5.87	10.8	1.70	635	0.002	0.01
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.025	0.281	8.90	10.8	1.70	635	0.002	0.01
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.025	0.278	8.99	10.8	1.70	635	0.002	0.01
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.136	0.221	61.5	10.8	1.70	635	0.01	0.10
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	0.025	0.718	3.48	10.8	1.70	635	0.002	0.01
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.025	0.472	5.30	8.14	1.88	432	0.003	0.01
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	0.333	1.16	28.7	8.14	1.88	432	0.04	0.07
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	1.55	1.39	112	8.14	1.88	432	0.19	0.26
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.025	0.412	6.07	8.14	1.88	432	0.003	0.01
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	2.23	4.36	51.2	8.14	1.88	432	0.27	0.12
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	0.025	0.322	7.76	8.14	1.88	432	0.003	0.02
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	0.025	0.495	5.05	8.14	1.88	432	0.003	0.01
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.025	0.446	5.61	8.14	1.88	432	0.003	0.01
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	1.37	1.77	77.2	8.14	1.88	432	0.17	0.18
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.617	0.752	82.0	8.14	1.88	432	0.08	0.19
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	0.805	0.833	96.6	8.14	1.88	432	0.10	0.22
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.025	0.756	3.31	8.14	1.88	432	0.003	0.01
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.416	0.582	71.5	8.14	1.88	432	0.05	0.17
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	1.91	0.418	457	8.14	1.88	432	0.235	1.06
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.025	0.596	4.19	2.79	2.05	136	0.01	0.03
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	4.04	0.257	1572	2.79	2.05	136	1.45	11.6
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.025	0.982	2.55	2.79	2.05	136	0.01	0.02
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.025	0.514	4.86	2.79	2.05	136	0.01	0.04
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	0.830	0.526	158	2.79	2.05	136	0.297	1.16
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	0.025	2.39	1.05	2.79	2.05	136	0.01	0.01
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.025	0.327	7.65	2.79	2.05	136	0.01	0.06
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.025	0.459	5.45	2.79	2.05	136	0.01	0.04
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.448	0.401	112	2.79	2.05	136	0.16	0.82
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.025	0.415	6.02	2.79	2.05	136	0.01	0.04
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.025	0.351	7.12	2.79	2.05	136	0.01	0.05
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	1.52	0.525	289	2.79	2.05	136	0.543	2.12
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.925	0.418	221	2.79	2.05	136	0.331	1.63
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	1.34	0.387	346	2.79	2.05	136	0.480	2.55

Notes:

a. Total PBDEs includes the sum PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, and 209.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total PBDEs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-6. Biota-Sediment Accumulation Factors for Total PBDEs[a]

Harbor	Species	Feeding Guild	Composite ID	Total PBDEs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total PBDEs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total PBDEs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total PBDEs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.813	0.385	211	3.42	0.987	346	0.24	0.61
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.025	0.382	6.54	3.42	0.987	346	0.01	0.02
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.188	0.243	77.4	3.42	0.987	346	0.05	0.22
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.382	0.435	87.8	3.42	0.987	346	0.11	0.25
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	3.24	0.235	1380	3.42	0.987	346	0.948	3.98
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	1.63	0.329	496	3.42	0.987	346	0.477	1.43
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	1.67	0.310	538	3.42	0.987	346	0.488	1.55
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	2.16	1.23	175	3.42	0.987	346	0.63	0.51
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	3.65	1.52	240	3.42	0.987	346	1.07	0.69
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	1.43	0.999	143	3.42	0.987	346	0.42	0.41
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	1.79	0.212	843	3.42	0.987	346	0.523	2.43
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	1.21	2.86	42.2	3.42	0.987	346	0.35	0.12
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	1.14	1.29	88.5	3.42	0.987	346	0.33	0.26
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	1.35	0.468	288	3.42	0.987	346	0.39	0.83
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	1.22	0.614	198	3.42	0.987	346	0.36	0.57
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	1.12	0.764	147	3.42	0.987	346	0.33	0.42
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.197	0.459	42.9	3.42	0.987	346	0.06	0.12
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	2.33	0.210	1109	3.42	0.987	346	0.681	3.20
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	4.01	4.90	81.9	3.42	0.987	346	1.17	0.24
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	1.13	1.35	83.7	3.42	0.987	346	0.33	0.24
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.200	0.200	99.8	3.42	0.987	346	0.06	0.29
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.025	0.275	9.09	3.42	0.987	346	0.01	0.03
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.025	0.160	15.6	3.42	0.987	346	0.01	0.05
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.025	0.284	8.80	7.69	1.16	663	0.003	0.01
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	1.22	0.180	676	7.69	1.16	663	0.158	1.02
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	1.28	0.155	824	7.69	1.16	663	0.166	1.24
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	1.18	2.91	40.4	7.69	1.16	663	0.15	0.06
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	0.914	2.09	43.7	7.69	1.16	663	0.12	0.07
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.025	0.492	5.08	7.69	1.16	663	0.003	0.01
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.304	0.505	60.2	7.69	1.16	663	0.04	0.09
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	1.70	1.37	124	7.69	1.16	663	0.22	0.19
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	1.63	1.32	124	7.69	1.16	663	0.21	0.19
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	1.21	1.36	89.0	7.69	1.16	663	0.16	0.13
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.139	0.259	53.7	7.69	1.16	663	0.02	0.08
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.025	0.199	12.6	7.69	1.16	663	0.003	0.02
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.025	0.264	9.47	7.69	1.16	663	0.003	0.01
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	2.09	0.657	319	7.69	1.16	663	0.27	0.48

Notes:

a. Total PBDEs includes the sum PBDE-17, 28, 47, 49, 66, 85, 99, 100, 138, 153, 154, 183, and 209.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total PBDEs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-7. Biota-Sediment Accumulation Factors for Total PCBs[a]

Harbor	Species	Feeding Guild	Composite ID	Total PCBs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total PCBs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total PCBs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total PCBs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	11.7	0.627	1871	3.10	1.70	182	3.79	10.3
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	4.08	0.877	465	3.10	1.70	182	1.32	2.55
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	2.87	1.08	265	3.10	1.70	182	0.93	1.45
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	13.8	1.30	1064	3.10	1.70	182	4.47	5.83
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	15.6	0.426	3651	3.10	1.70	182	5.03	20.0
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	1.56	0.281	553	3.10	1.70	182	0.50	3.03
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.250	0.278	89.9	3.10	1.70	182	0.08	0.49
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.393	0.221	178	3.10	1.70	182	0.13	0.97
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	1.62	0.718	226	3.10	1.70	182	0.52	1.24
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	7.99	0.472	1694	1.77	1.88	94.1	4.52	18.0
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	10.7	1.16	923	1.77	1.88	94.1	6.05	9.81
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	17.5	1.39	1257	1.77	1.88	94.1	9.87	13.4
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	7.59	0.412	1842	1.77	1.88	94.1	4.29	19.6
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	24.9	4.36	572	1.77	1.88	94.1	14.1	6.08
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	1.45	0.322	450	1.77	1.88	94.1	0.82	4.79
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	1.29	0.495	260	1.77	1.88	94.1	0.73	2.77
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.863	0.446	193	1.77	1.88	94.1	0.49	2.06
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	17.8	1.77	1003	1.77	1.88	94.1	10.0	10.7
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	7.14	0.752	949	1.77	1.88	94.1	4.03	10.1
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	6.53	0.833	784	1.77	1.88	94.1	3.69	8.34
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	4.18	0.756	553	1.77	1.88	94.1	2.36	5.88
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	9.76	0.582	1678	1.77	1.88	94.1	5.52	17.8
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	10.7	0.418	2554	1.77	1.88	94.1	6.03	27.2
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	2.19	0.596	368	1.33	2.05	64.9	1.64	5.66
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	16.2	0.257	6321	1.33	2.05	64.9	12.2	97.4
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	26.9	0.982	2737	1.33	2.05	64.9	20.2	42.2
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	4.34	0.514	844	1.33	2.05	64.9	3.25	13.0
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	9.05	0.526	1720	1.33	2.05	64.9	6.79	26.5
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	17.0	2.39	712	1.33	2.05	64.9	12.8	11.0
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.534	0.327	163	1.33	2.05	64.9	0.40	2.52
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	1.44	0.459	314	1.33	2.05	64.9	1.08	4.84
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	3.02	0.401	752	1.33	2.05	64.9	2.26	11.6
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	4.43	0.415	1068	1.33	2.05	64.9	3.33	16.4
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	2.34	0.351	666	1.33	2.05	64.9	1.76	10.3
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	11.2	0.525	2129	1.33	2.05	64.9	8.39	32.8
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	11.8	0.418	2829	1.33	2.05	64.9	8.87	43.6
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	71.6	0.387	18493	1.33	2.05	64.9	53.7	285

Notes:

a. Total PCBs includes the sum of congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209. Note that this list is a subset of the total 209 PCB congeners.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total PCBs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-7. Biota-Sediment Accumulation Factors for Total PCBs[a]

Harbor	Species	Feeding Guild	Composite ID	Total PCBs Tissue Conc. (ng/g ww)	Tissue Lipid Conc. (%)	Total PCBs Tissue Conc. Lipid Normalized (ng/g ww/lipid)	Average[b] Total PCBs Sediment Conc. (ng/g dw)	Average[b] Sediment TOC Conc. (%)	Total PCBs Conc. Normalized to TOC (ng/g dw/TOC)	BSAF - Not Normalized	BSAF - Normalized Based on Tissue Lipid and Sediment TOC Conc.
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	27.5	0.385	7142	45.0	0.987	4561	0.61	1.57
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	27.9	0.382	7308	45.0	0.987	4561	0.62	1.60
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	8.40	0.243	3458	45.0	0.987	4561	0.19	0.76
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	27.8	0.435	6386	45.0	0.987	4561	0.62	1.40
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	30.0	0.235	12759	45.0	0.987	4561	0.67	2.80
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	110	0.329	33312	45.0	0.987	4561	2.43	7.30
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	66.5	0.310	21451	45.0	0.987	4561	1.48	4.70
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	22.2	1.23	1808	45.0	0.987	4561	0.49	0.40
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	16.5	1.52	1086	45.0	0.987	4561	0.37	0.24
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	19.8	0.999	1982	45.0	0.987	4561	0.44	0.43
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	23.0	0.212	10836	45.0	0.987	4561	0.51	2.38
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	145	2.86	5064	45.0	0.987	4561	3.22	1.11
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	132	1.29	10210	45.0	0.987	4561	2.93	2.24
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	46.6	0.468	9954	45.0	0.987	4561	1.03	2.18
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	44.5	0.614	7251	45.0	0.987	4561	0.99	1.59
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	42.9	0.764	5613	45.0	0.987	4561	0.95	1.23
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	35.1	0.459	7656	45.0	0.987	4561	0.78	1.68
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	26.5	0.210	12621	45.0	0.987	4561	0.59	2.77
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	112	4.90	2295	45.0	0.987	4561	2.50	0.50
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	156	1.35	11545	45.0	0.987	4561	3.46	2.53
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	26.7	0.200	13375	45.0	0.987	4561	0.59	2.93
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	27.8	0.275	10121	45.0	0.987	4561	0.62	2.22
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	10.3	0.160	6441	45.0	0.987	4561	0.23	1.41
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	35.0	0.284	12333	25.1	1.16	2167	1.39	5.69
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	66.6	0.180	37019	25.1	1.16	2167	2.65	17.1
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	6.87	0.155	4432	25.1	1.16	2167	0.27	2.04
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	190	2.91	6521	25.1	1.16	2167	7.55	3.01
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	149	2.09	7125	25.1	1.16	2167	5.92	3.29
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	28.5	0.492	5788	25.1	1.16	2167	1.13	2.67
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	23.6	0.505	4677	25.1	1.16	2167	0.94	2.16
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	203	1.37	14804	25.1	1.16	2167	8.07	6.83
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	226	1.32	17095	25.1	1.16	2167	8.97	7.89
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	194	1.36	14248	25.1	1.16	2167	7.71	6.57
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	29.5	0.259	11392	25.1	1.16	2167	1.17	5.26
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	21.6	0.199	10848	25.1	1.16	2167	0.86	5.01
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	19.4	0.264	7350	25.1	1.16	2167	0.77	3.39
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	29.8	0.657	4528	25.1	1.16	2167	1.18	2.09

Notes:

a. Total PCBs includes the sum of congeners: PCB-3, 5, 8, 15, 18, 27, 28, 29, 31, 33, 37, 44, 49, 52, 56(60), 66, 70, 74, 77, 81, 87, 95, 97, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 137, 138, 141, 149, 151, 153, 156, 157, 158, 167, 168+132, 169, 170, 177, 180, 183, 187, 189, 194, 195, 199(200), 201, 203, 206, and 209. Note that this list is a subset of the total 209 PCB congeners.

b. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

If all components of the summed analyte (total PCBs) were not detected (ND), 1/2 of the highest MDL of the individual components was used for calculations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-8. Biota-Sediment Accumulation Factors for Total Arsenic

Harbor	Species	Feeding Guild	Composite ID	Total Arsenic Tissue Conc. (µg/g ww)	Average[a] Total Arsenic Sediment Conc. (µg/g dw)	BSAF - Not Normalized
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	2.27	9.39	0.24
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	1.25	9.39	0.13
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	0.414	9.39	0.04
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	1.25	9.39	0.13
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	1.16	9.39	0.12
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.374	9.39	0.04
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.342	9.39	0.04
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.409	9.39	0.04
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	1.39	9.39	0.15
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.656	9.57	0.07
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	4.16	9.57	0.44
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	1.20	9.57	0.13
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.766	9.57	0.08
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	0.733	9.57	0.08
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	1.29	9.57	0.14
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	1.78	9.57	0.19
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	1.22	9.57	0.13
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	0.606	9.57	0.06
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.965	9.57	0.10
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	1.42	9.57	0.15
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.815	9.57	0.09
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.781	9.57	0.08
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.538	9.57	0.06
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.551	8.79	0.06
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	10.3	8.79	1.17
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	14.0	8.79	1.59
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	6.19	8.79	0.70
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	1.30	8.79	0.15
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	0.787	8.79	0.09
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.793	8.79	0.09
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.685	8.79	0.08
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.656	8.79	0.07
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.610	8.79	0.07
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.570	8.79	0.06
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.775	8.79	0.09
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.768	8.79	0.09
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.679	8.79	0.08

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

% = percent; µg/g = microgram(s) per gram; BSAF = biota to sediment accumulation factor; dw = dry weight; TOC = total organic carbon; ww = wet weight

Appendix Table B-8. Biota-Sediment Accumulation Factors for Total Arsenic

Harbor	Species	Feeding Guild	Composite ID	Total Arsenic Tissue Conc. (µg/g ww)	Average[a] Total Arsenic Sediment Conc. (µg/g dw)	BSAF - Not Normalized
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.772	7.84	0.10
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	1.08	7.84	0.14
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.798	7.84	0.10
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	1.08	7.84	0.14
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.688	7.84	0.09
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.509	7.84	0.06
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	2.57	7.84	0.33
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	1.10	7.84	0.14
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	1.59	7.84	0.20
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	1.47	7.84	0.19
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	6.98	7.84	0.89
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	2.73	7.84	0.35
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	1.71	7.84	0.22
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	0.877	7.84	0.11
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	1.13	7.84	0.14
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	1.04	7.84	0.13
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	8.06	7.84	1.03
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	3.90	7.84	0.50
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	0.936	7.84	0.12
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	1.20	7.84	0.15
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.412	7.84	0.05
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.617	7.84	0.08
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.549	7.84	0.07
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.523	7.71	0.07
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	0.768	7.71	0.10
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	11.6	7.71	1.50
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	2.48	7.71	0.32
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	2.52	7.71	0.33
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	10.1	7.71	1.30
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	10.1	7.71	1.31
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	1.13	7.71	0.15
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	1.06	7.71	0.14
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	1.05	7.71	0.14
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.544	7.71	0.07
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.353	7.71	0.05
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.466	7.71	0.06
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	1.25	7.71	0.16

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

% = percent; µg/g = microgram(s) per gram; BSAF = biota to sediment accumulation factor; dw = dry weight; TOC = total organic carbon; ww = wet weight

Appendix Table B-9. Biota-Sediment Accumulation Factors for Total Mercury

Harbor	Species	Composite ID	Feeding Guild	Total Mercury Tissue Conc. (ng/g ww)	Average[a] Total Mercury Sediment Conc. (ng/g dw)	BSAF - Not Normalized
Dana Point Harbor	Barred Sand Bass	C1_90110DANABOG18BSB	Predator - Mesocarnivore	80.7	51.4	1.57
Dana Point Harbor	Black Perch	C1_90110DANABOG18BLS	Predator - Inverts	13.6	51.4	0.27
Dana Point Harbor	Chub Mackerel	C1_90110DANABOG18PCM	Forage - Mesocarnivore	75.9	51.4	1.48
Dana Point Harbor	Shiner Surfperch	C1_90110DANABOG18SHS	Predator - Inverts	18.6	51.4	0.36
Dana Point Harbor	Spotted Sand Bass	C1_90110DANABOG18SSB	Predator - Mesocarnivore	50.6	51.4	0.99
Dana Point Harbor	White Croaker	C1_90110DANABOG18WCR	Predator - Mesocarnivore	123	51.4	2.40
Dana Point Harbor	White Croaker	C2_90110DANABOG18WCR	Predator - Mesocarnivore	120	51.4	2.34
Dana Point Harbor	White Croaker	C3_90110DANABOG18WCR	Predator - Mesocarnivore	111	51.4	2.17
Dana Point Harbor	White Surfperch	C1_90110DANABOG18WHS	Predator - Inverts	17.7	51.4	0.34
Oceanside Harbor	Barred Sand Bass	C1_90208OCNHBOG18BSB	Predator - Mesocarnivore	83.1	161	0.52
Oceanside Harbor	Barred Sand Bass	C2_90208OCNHBOG18BSB	Predator - Mesocarnivore	92.2	161	0.57
Oceanside Harbor	Barred Sand Bass	C3_90208OCNHBOG18BSB	Predator - Mesocarnivore	112	161	0.69
Oceanside Harbor	California Halibut	C1_90208OCNHBOG18CAH	Predator - Mesocarnivore	34.3	161	0.21
Oceanside Harbor	Shiner Surfperch	C1_90208OCNHBOG18SHS	Predator - Inverts	16.5	161	0.10
Oceanside Harbor	Spotfin Croaker	C1_90208OCNHBOG18SFC	Predator - Inverts	22.6	161	0.14
Oceanside Harbor	Spotfin Croaker	C2_90208OCNHBOG18SFC	Predator - Inverts	11.5	161	0.07
Oceanside Harbor	Spotfin Croaker	C3_90208OCNHBOG18SFC	Predator - Inverts	12.0	161	0.07
Oceanside Harbor	Spotted Sand Bass	C1_90208OCNHBOG18SSB	Predator - Mesocarnivore	86.6	161	0.54
Oceanside Harbor	Spotted Sand Bass	C2_90208OCNHBOG18SSB	Predator - Mesocarnivore	120	161	0.74
Oceanside Harbor	Spotted Sand Bass	C3_90208OCNHBOG18SSB	Predator - Mesocarnivore	93.4	161	0.58
Oceanside Harbor	White Surfperch	C1_90208OCNHBOG18WHS	Predator - Inverts	30.5	161	0.19
Oceanside Harbor	Yellowfin Croaker	C1_90208OCNHBOG18YFC	Predator - Mesocarnivore	179	161	1.11
Oceanside Harbor	Yellowfin Croaker	C2_90208OCNHBOG18YFC	Predator - Mesocarnivore	115	161	0.72
Mission Bay	Black Perch	C1_90606MISSBOG18BLS	Predator - Inverts	23.1	74.2	0.31
Mission Bay	Brown Smooth-hound Shark	C1_90606MISSBOG18BSH	Predator - Mesocarnivore	566	74.2	7.62
Mission Bay	California Corbina	C1_90606MICABOG18CAC	Predator - Mesocarnivore	49.7	74.2	0.67
Mission Bay	Round Stingray	C1_90606MISSBOG18RSR	Predator - Mesocarnivore	92.6	74.2	1.25
Mission Bay	Salema	C1_90606MISSBOG18SEL	Predator - Inverts	237	74.2	3.19
Mission Bay	Shiner Surfperch	C1_90606MISSBOG18SHS	Predator - Inverts	16.9	74.2	0.23
Mission Bay	Spotted Sand Bass	C1_90606MISSBOG18SSB	Predator - Mesocarnivore	58.8	74.2	0.79
Mission Bay	Spotted Sand Bass	C2_90606MISSBOG18SSB	Predator - Mesocarnivore	33.7	74.2	0.45
Mission Bay	Spotted Sand Bass	C3_90606MISSBOG18SSB	Predator - Mesocarnivore	42.6	74.2	0.57
Mission Bay	White Surfperch	C1_90606MISSBOG18WHS	Predator - Inverts	82.5	74.2	1.11
Mission Bay	White Surfperch	C2_90606MISSBOG18WHS	Predator - Inverts	54.1	74.2	0.73
Mission Bay	Yellowfin Croaker	C1_90606MISSBOG18YFC	Predator - Mesocarnivore	184	74.2	2.48
Mission Bay	Yellowfin Croaker	C2_90606MISSBOG18YFC	Predator - Mesocarnivore	101	74.2	1.36
Mission Bay	Yellowfin Croaker	C3_90606MISSBOG18YFC	Predator - Mesocarnivore	84.1	74.2	1.13

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-9. Biota-Sediment Accumulation Factors for Total Mercury

Harbor	Species	Composite ID	Feeding Guild	Total Mercury Tissue Conc. (ng/g ww)	Average[a] Total Mercury Sediment Conc. (ng/g dw)	BSAF - Not Normalized
North SD Bay	Barred Sand Bass	C1_91203SDNBBOG18BSB	Predator - Mesocarnivore	94.4	471	0.20
North SD Bay	Barred Sand Bass	C2_91203SDNBBOG18BSB	Predator - Mesocarnivore	94.5	471	0.20
North SD Bay	Black Croaker	C1_91203SDNBBOG18BKC	Predator - Mesocarnivore	223	471	0.47
North SD Bay	Black Perch	C1_91203SDNBBOG18BLS	Predator - Inverts	54.1	471	0.11
North SD Bay	Chub Mackerel	C1_91203SDNBBOG18PCM	Forage - Mesocarnivore	74.9	471	0.16
North SD Bay	Chub Mackerel	C2_91203SDNBBOG18PCM	Forage - Mesocarnivore	98.5	471	0.21
North SD Bay	Chub Mackerel	C3_91203SDNBBOG18PCM	Forage - Mesocarnivore	80.9	471	0.17
North SD Bay	Kelp Bass	C1_91203SDNBBOG18KPB	Predator - Mesocarnivore	92.3	471	0.20
North SD Bay	Kelp Bass	C2_91203SDNBBOG18KPB	Predator - Mesocarnivore	81.0	471	0.17
North SD Bay	Kelp Bass	C3_91203SDNBBOG18KPB	Predator - Mesocarnivore	82.6	471	0.18
North SD Bay	Leopard shark	C1_91203SDNBBOG18LPS	Predator - Mesocarnivore	2026	471	4.30
North SD Bay	Northern Anchovy	C1_91203SDNBBOG18NAC	Forage - Planktivore	19.1	471	0.04
North SD Bay	Northern Anchovy	C2_91203SDNBBOG18NAC	Forage - Planktivore	15.7	471	0.03
North SD Bay	Queenfish	C1_91203SDNBBOG18QEF	Predator - Mesocarnivore	193	471	0.41
North SD Bay	Queenfish	C2_91203SDNBBOG18QEF	Predator - Mesocarnivore	155	471	0.33
North SD Bay	Queenfish	C3_91203SDNBBOG18QEF	Predator - Mesocarnivore	97.8	471	0.21
North SD Bay	Round Stingray	C1_91203SDNBBOG18RSR	Predator - Mesocarnivore	368	471	0.78
North SD Bay	Round Stingray	C2_91203SDNBBOG18RSR	Predator - Mesocarnivore	190	471	0.40
North SD Bay	Shiner Surfperch	C1_91203SDNBBOG18SHS	Predator - Inverts	38.0	471	0.08
North SD Bay	Slough Anchovy	C1_91203SDNBBOG18SAC	Forage - Planktivore	56.7	471	0.12
North SD Bay	Spotted Sand Bass	C1_91203SDNBBOG18SSB	Predator - Mesocarnivore	262	471	0.55
North SD Bay	Spotted Sand Bass	C2_91203SDNBBOG18SSB	Predator - Mesocarnivore	193	471	0.41
North SD Bay	Spotted Sand Bass	C3_91203SDNBBOG18SSB	Predator - Mesocarnivore	164	471	0.35
South SD Bay	Black Croaker	C1_91202SDSBBOG18BKC	Predator - Mesocarnivore	472	287	1.64
South SD Bay	Chub Mackerel	C1_91202SDSBBOG18PCM	Forage - Mesocarnivore	164	287	0.57
South SD Bay	Leopard shark	C1_91202SDSBBOG18LPS	Predator - Mesocarnivore	1068	287	3.72
South SD Bay	Northern Anchovy	C1_91202SDSBBOG18NAC	Forage - Planktivore	19.9	287	0.07
South SD Bay	Northern Anchovy	C2_91202SDSBBOG18NAC	Forage - Planktivore	17.6	287	0.06
South SD Bay	Round Stingray	C1_91202SDSBBOG18RSR	Predator - Mesocarnivore	274	287	0.95
South SD Bay	Round Stingray	C2_91202SDSBBOG18RSR	Predator - Mesocarnivore	276	287	0.96
South SD Bay	Slough Anchovy	C1_91202SDSBBOG18SAC	Forage - Planktivore	56.5	287	0.20
South SD Bay	Slough Anchovy	C2_91202SDSBBOG18SAC	Forage - Planktivore	58.8	287	0.20
South SD Bay	Slough Anchovy	C3_91202SDSBBOG18SAC	Forage - Planktivore	62.0	287	0.22
South SD Bay	Spotted Sand Bass	C1_91202SDSBBOG18SSB	Predator - Mesocarnivore	164	287	0.57
South SD Bay	Spotted Sand Bass	C2_91202SDSBBOG18SSB	Predator - Mesocarnivore	277	287	0.97
South SD Bay	Spotted Sand Bass	C3_91202SDSBBOG18SSB	Predator - Mesocarnivore	205	287	0.71
South SD Bay	Yellowfin Croaker	C1_91202SDSBBOG18YFC	Predator - Mesocarnivore	116	287	0.40

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

% = percent; BSAF = biota to sediment accumulation factor; dw = dry weight; ng/g = nanogram(s) per gram; TOC = total organic carbon; ww = wet weight

Appendix Table B-10. Biota-Sediment Accumulation Factors for Total Selenium

Harbor	Species	Feeding Guild	Composite ID	Total Selenium Tissue Conc. (ug/g ww)	Average[a] Total Selenium Sediment Conc. (µg/g dw)	BSAF - Not Normalized
Dana Point Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18BSB	0.394	0.709	0.56
Dana Point Harbor	Black Perch	Predator - Inverts	C1_90110DANABOG18BLS	0.187	0.709	0.26
Dana Point Harbor	Chub Mackerel	Forage - Mesocarnivore	C1_90110DANABOG18PCM	0.302	0.709	0.43
Dana Point Harbor	Shiner Surfperch	Predator - Inverts	C1_90110DANABOG18SHS	0.240	0.709	0.34
Dana Point Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90110DANABOG18SSB	0.393	0.709	0.56
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C1_90110DANABOG18WCR	0.153	0.709	0.22
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C2_90110DANABOG18WCR	0.148	0.709	0.21
Dana Point Harbor	White Croaker	Predator - Mesocarnivore	C3_90110DANABOG18WCR	0.161	0.709	0.23
Dana Point Harbor	White Surfperch	Predator - Inverts	C1_90110DANABOG18WHS	0.190	0.709	0.27
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18BSB	0.268	0.485	0.55
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18BSB	0.311	0.485	0.64
Oceanside Harbor	Barred Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18BSB	0.322	0.485	0.66
Oceanside Harbor	California Halibut	Predator - Mesocarnivore	C1_90208OCNHBOG18CAH	0.197	0.485	0.41
Oceanside Harbor	Shiner Surfperch	Predator - Inverts	C1_90208OCNHBOG18SHS	0.193	0.485	0.40
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C1_90208OCNHBOG18SFC	0.285	0.485	0.59
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C2_90208OCNHBOG18SFC	0.191	0.485	0.39
Oceanside Harbor	Spotfin Croaker	Predator - Inverts	C3_90208OCNHBOG18SFC	0.212	0.485	0.44
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C1_90208OCNHBOG18SSB	0.254	0.485	0.52
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C2_90208OCNHBOG18SSB	0.259	0.485	0.53
Oceanside Harbor	Spotted Sand Bass	Predator - Mesocarnivore	C3_90208OCNHBOG18SSB	0.256	0.485	0.53
Oceanside Harbor	White Surfperch	Predator - Inverts	C1_90208OCNHBOG18WHS	0.175	0.485	0.36
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C1_90208OCNHBOG18YFC	0.344	0.485	0.71
Oceanside Harbor	Yellowfin Croaker	Predator - Mesocarnivore	C2_90208OCNHBOG18YFC	0.200	0.485	0.41
Mission Bay	Black Perch	Predator - Inverts	C1_90606MISSBOG18BLS	0.161	0.488	0.33
Mission Bay	Brown Smooth-hound Shark	Predator - Mesocarnivore	C1_90606MISSBOG18BSH	0.175	0.488	0.36
Mission Bay	California Corbina	Predator - Mesocarnivore	C1_90606MICABOG18CAC	0.259	0.488	0.53
Mission Bay	Round Stingray	Predator - Mesocarnivore	C1_90606MISSBOG18RSR	0.456	0.488	0.93
Mission Bay	Salema	Predator - Inverts	C1_90606MISSBOG18SEL	0.220	0.488	0.45
Mission Bay	Shiner Surfperch	Predator - Inverts	C1_90606MISSBOG18SHS	0.199	0.488	0.41
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_90606MISSBOG18SSB	0.324	0.488	0.66
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_90606MISSBOG18SSB	0.261	0.488	0.53
Mission Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_90606MISSBOG18SSB	0.248	0.488	0.51
Mission Bay	White Surfperch	Predator - Inverts	C1_90606MISSBOG18WHS	0.205	0.488	0.42
Mission Bay	White Surfperch	Predator - Inverts	C2_90606MISSBOG18WHS	0.190	0.488	0.39
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_90606MISSBOG18YFC	0.277	0.488	0.57
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C2_90606MISSBOG18YFC	0.297	0.488	0.61
Mission Bay	Yellowfin Croaker	Predator - Mesocarnivore	C3_90606MISSBOG18YFC	0.280	0.488	0.57

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

% = percent; µg/g = microgram(s) per gram; BSAF = biota to sediment accumulation factor; dw = dry weight; TOC = total organic carbon; ww = wet weight

Appendix Table B-10. Biota-Sediment Accumulation Factors for Total Selenium

Harbor	Species	Feeding Guild	Composite ID	Total Selenium Tissue Conc. (ug/g ww)	Average[a] Total Selenium Sediment Conc. (µg/g dw)	BSAF - Not Normalized
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18BSB	0.287	0.277	1.04
North SD Bay	Barred Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18BSB	0.296	0.277	1.07
North SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91203SDNBBOG18BKC	0.235	0.277	0.85
North SD Bay	Black Perch	Predator - Inverts	C1_91203SDNBBOG18BLS	0.154	0.277	0.56
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91203SDNBBOG18PCM	0.330	0.277	1.19
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C2_91203SDNBBOG18PCM	0.360	0.277	1.30
North SD Bay	Chub Mackerel	Forage - Mesocarnivore	C3_91203SDNBBOG18PCM	0.400	0.277	1.45
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18KPB	0.304	0.277	1.10
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18KPB	0.331	0.277	1.20
North SD Bay	Kelp Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18KPB	0.321	0.277	1.16
North SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91203SDNBBOG18LPS	0.194	0.277	0.70
North SD Bay	Northern Anchovy	Forage - Planktivore	C1_91203SDNBBOG18NAC	0.313	0.277	1.13
North SD Bay	Northern Anchovy	Forage - Planktivore	C2_91203SDNBBOG18NAC	0.263	0.277	0.95
North SD Bay	Queenfish	Predator - Mesocarnivore	C1_91203SDNBBOG18QEF	0.171	0.277	0.62
North SD Bay	Queenfish	Predator - Mesocarnivore	C2_91203SDNBBOG18QEF	0.164	0.277	0.59
North SD Bay	Queenfish	Predator - Mesocarnivore	C3_91203SDNBBOG18QEF	0.176	0.277	0.64
North SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91203SDNBBOG18RSR	0.595	0.277	2.15
North SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91203SDNBBOG18RSR	0.460	0.277	1.66
North SD Bay	Shiner Surfperch	Predator - Inverts	C1_91203SDNBBOG18SHS	0.176	0.277	0.64
North SD Bay	Slough Anchovy	Forage - Planktivore	C1_91203SDNBBOG18SAC	0.275	0.277	0.99
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91203SDNBBOG18SSB	0.351	0.277	1.27
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91203SDNBBOG18SSB	0.313	0.277	1.13
North SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91203SDNBBOG18SSB	0.322	0.277	1.17
South SD Bay	Black Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18BKC	0.472	0.316	1.49
South SD Bay	Chub Mackerel	Forage - Mesocarnivore	C1_91202SDSBBOG18PCM	0.419	0.316	1.33
South SD Bay	Leopard shark	Predator - Mesocarnivore	C1_91202SDSBBOG18LPS	0.185	0.316	0.59
South SD Bay	Northern Anchovy	Forage - Planktivore	C1_91202SDSBBOG18NAC	0.350	0.316	1.11
South SD Bay	Northern Anchovy	Forage - Planktivore	C2_91202SDSBBOG18NAC	0.395	0.316	1.25
South SD Bay	Round Stingray	Predator - Mesocarnivore	C1_91202SDSBBOG18RSR	0.597	0.316	1.89
South SD Bay	Round Stingray	Predator - Mesocarnivore	C2_91202SDSBBOG18RSR	0.627	0.316	1.98
South SD Bay	Slough Anchovy	Forage - Planktivore	C1_91202SDSBBOG18SAC	0.368	0.316	1.16
South SD Bay	Slough Anchovy	Forage - Planktivore	C2_91202SDSBBOG18SAC	0.358	0.316	1.13
South SD Bay	Slough Anchovy	Forage - Planktivore	C3_91202SDSBBOG18SAC	0.416	0.316	1.32
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C1_91202SDSBBOG18SSB	0.418	0.316	1.32
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C2_91202SDSBBOG18SSB	0.473	0.316	1.50
South SD Bay	Spotted Sand Bass	Predator - Mesocarnivore	C3_91202SDSBBOG18SSB	0.491	0.316	1.56
South SD Bay	Yellowfin Croaker	Predator - Mesocarnivore	C1_91202SDSBBOG18YFC	0.250	0.316	0.79

Notes:

a. Sediment chemistry data from the 2013 and 2018 RHMP were averaged for each survey area. While all stations were selected using randomized stratification, North San Diego Bay within Shelter Island Yacht Basin (SIYB) had a larger number of sampling stations in 2013 and 2018 (6 stations in 2013 and 5 stations in 2018). To avoid overweighting the area composite, all stations within SIYB for each year were averaged and that average was included with the rest of the North San Diego Bay stations to derive the average composite area sediment concentrations.

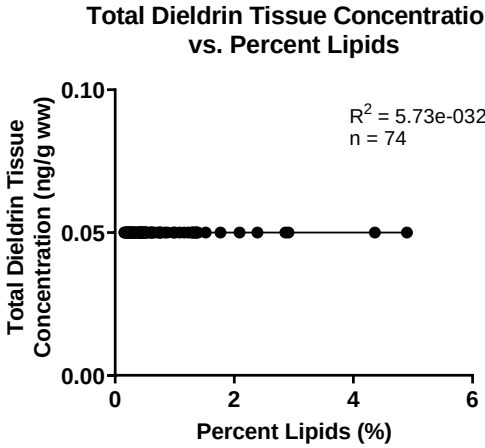
% = percent; µg/g = microgram(s) per gram; BSAF = biota to sediment accumulation factor; dw = dry weight; TOC = total organic carbon; ww = wet weight

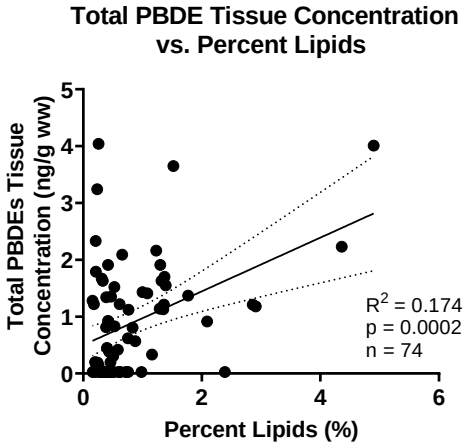
APPENDIX C

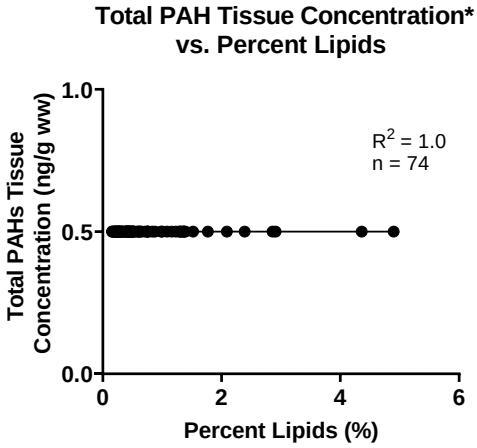
STATISTICAL AND GRAPHICAL ANALYSES

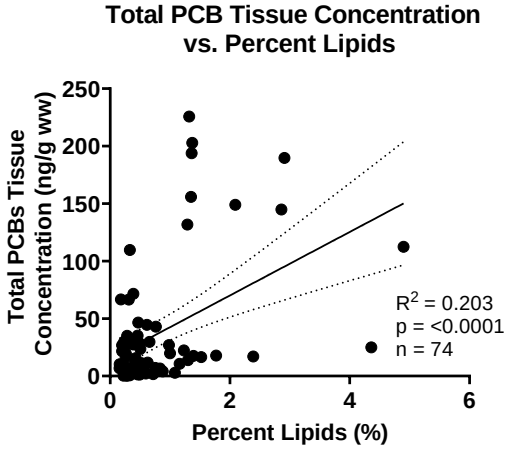
Supplemental Figures

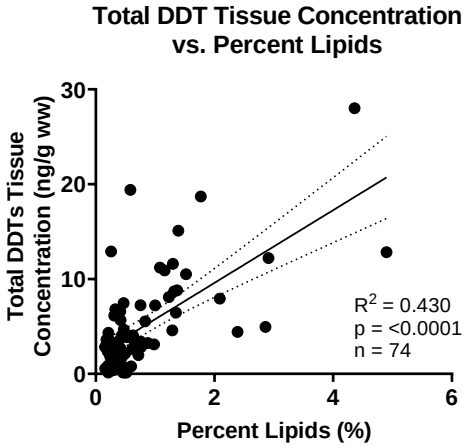
Lipid Regressions

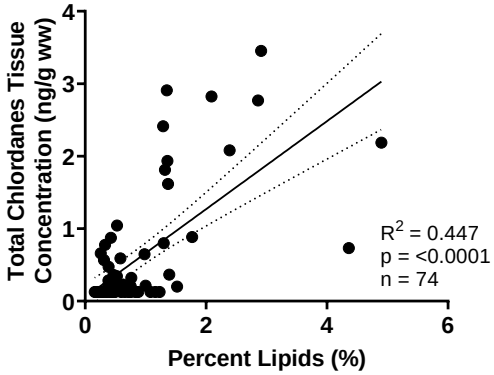












For analytes reported as non-detect (ND), one-half of the method detection limit was used for calculation purposes only.
*- Analyte reported as ND in all samples. As a result, there is no p-value determined for this regression.

Statistical Comparisons for Sediment Chemistry by Harbor-

2013 and 2018 Averaged Results

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total PCBs by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	44.03

Data summary	
Number of treatments (columns)	5
Number of values (total)	140

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (8) vs. Mission Bay (18)	19.70	No	ns	>0.9999
Dana Point (8) vs. Oceanside (6)	12.90	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	-46.78	Yes	*	0.0309
Dana Point (8) vs. SD South Bay (71)	-33.84	No	ns	0.2523
Mission Bay (18) vs. Oceanside (6)	-6.806	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	-66.48	Yes	****	<0.0001
Mission Bay (18) vs. SD South Bay (71)	-53.54	Yes	****	<0.0001
Oceanside (6) vs. SD North Bay (37)	-59.67	Yes	**	0.0083
Oceanside (6) vs. SD South Bay (71)	-46.73	No	ns	0.0670
SD North Bay (37) vs. SD South Bay (71)	12.94	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total DDTs by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0014
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	17.78

Data summary

Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (8) vs. Mission Bay (18)	43.98	No	ns	0.0929
Dana Point (8) vs. Oceanside (7)	3.170	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	51.38	Yes	**	0.0093
Dana Point (8) vs. SD South Bay (71)	43.81	Yes	*	0.0316
Mission Bay (18) vs. Oceanside (7)	-40.81	No	ns	0.2131
Mission Bay (18) vs. SD North Bay (37)	7.401	No	ns	>0.9999
Mission Bay (18) vs. SD South Bay (71)	-0.1737	No	ns	>0.9999
Oceanside (7) vs. SD North Bay (37)	48.21	Yes	*	0.0329
Oceanside (7) vs. SD South Bay (71)	40.64	No	ns	0.0994
SD North Bay (37) vs. SD South Bay (71)	-7.575	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total Chlordanes by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.7378
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	1.989

Data summary

Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (8) vs. Mission Bay (18)	-4.479	No	ns	>0.9999
Dana Point (8) vs. Oceanside (7)	17.47	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	6.444	No	ns	>0.9999
Dana Point (8) vs. SD South Bay (71)	5.364	No	ns	>0.9999
Mission Bay (18) vs. Oceanside (7)	21.95	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	10.92	No	ns	>0.9999
Mission Bay (18) vs. SD South Bay (71)	9.843	No	ns	>0.9999
Oceanside (7) vs. SD North Bay (37)	-11.03	No	ns	>0.9999
Oceanside (7) vs. SD South Bay (71)	-12.11	No	ns	>0.9999
SD North Bay (37) vs. SD South Bay (71)	-1.081	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total Arsenic by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	0.2643
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	5.233

Data summary	
Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (8) vs. Mission Bay (18)	6.861	No	ns	>0.9999
Dana Point (8) vs. Oceanside (7)	-8.857	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	19.51	No	ns	>0.9999
Dana Point (8) vs. SD South Bay (71)	18.75	No	ns	>0.9999
Mission Bay (18) vs. Oceanside (7)	-15.72	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	12.65	No	ns	>0.9999
Mission Bay (18) vs. SD South Bay (71)	11.89	No	ns	>0.9999
Oceanside (7) vs. SD North Bay (37)	28.37	No	ns	0.9197
Oceanside (7) vs. SD South Bay (71)	27.61	No	ns	0.8796
SD North Bay (37) vs. SD South Bay (71)	-0.7600	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total Mercury by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	42.65

Data summary

Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (8) vs. Mission Bay (18)	-7.292	No	ns	>0.9999
Dana Point (8) vs. Oceanside (7)	-32.27	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	-68.80	Yes	***	0.0002
Dana Point (8) vs. SD South Bay (71)	-56.67	Yes	**	0.0020
Mission Bay (18) vs. Oceanside (7)	-24.98	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	-61.51	Yes	****	<0.0001
Mission Bay (18) vs. SD South Bay (71)	-49.38	Yes	****	<0.0001
Oceanside (7) vs. SD North Bay (37)	-36.53	No	ns	0.3001
Oceanside (7) vs. SD South Bay (71)	-24.41	No	ns	>0.9999
SD North Bay (37) vs. SD South Bay (71)	12.13	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total Selenium by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	31.65

Data summary

Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (8) vs. Mission Bay (18)	31.19	No	ns	0.7235
Dana Point (8) vs. Oceanside (7)	24.29	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	70.98	Yes	****	<0.0001
Dana Point (8) vs. SD South Bay (71)	60.82	Yes	***	0.0007
Mission Bay (18) vs. Oceanside (7)	-6.893	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	39.79	Yes	**	0.0070
Mission Bay (18) vs. SD South Bay (71)	29.63	No	ns	0.0598
Oceanside (7) vs. SD North Bay (37)	46.68	No	ns	0.0556
Oceanside (7) vs. SD South Bay (71)	36.52	No	ns	0.2400
SD North Bay (37) vs. SD South Bay (71)	-10.16	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Percent TOC by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	26.66

Data summary	
Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (8) vs. Mission Bay (18)	-7.243	No	ns	>0.9999
Dana Point (8) vs. Oceanside (7)	-9.795	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	41.12	No	ns	0.0983
Dana Point (8) vs. SD South Bay (71)	31.15	No	ns	0.4089
Mission Bay (18) vs. Oceanside (7)	-2.552	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	48.36	Yes	***	0.0004
Mission Bay (18) vs. SD South Bay (71)	38.39	Yes	**	0.0037
Oceanside (7) vs. SD North Bay (37)	50.91	Yes	*	0.0249
Oceanside (7) vs. SD South Bay (71)	40.94	No	ns	0.1140
SD North Bay (37) vs. SD South Bay (71)	-9.970	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total PBDEs by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	0.3591
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	4.363

Data summary	
Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (8) vs. Mission Bay (18)	22.68	No	ns	>0.9999
Dana Point (8) vs. Oceanside (7)	3.268	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	27.23	No	ns	0.8617
Dana Point (8) vs. SD South Bay (71)	19.70	No	ns	>0.9999
Mission Bay (18) vs. Oceanside (7)	-19.41	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	4.553	No	ns	>0.9999
Mission Bay (18) vs. SD South Bay (71)	-2.978	No	ns	>0.9999
Oceanside (7) vs. SD North Bay (37)	23.97	No	ns	>0.9999
Oceanside (7) vs. SD South Bay (71)	16.43	No	ns	>0.9999
SD North Bay (37) vs. SD South Bay (71)	-7.531	No	ns	>0.9999

Statistical Comparisons for Sediment Chemistry by Harbor
2013 and 2018 Averaged Values

Total PAHs by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	25.95

Data summary	
Number of treatments (columns)	5
Number of values (total)	141

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (8) vs. Mission Bay (18)	13.58	No	ns	>0.9999
Dana Point (8) vs. Oceanside (7)	23.39	No	ns	>0.9999
Dana Point (8) vs. SD North Bay (37)	-35.78	No	ns	0.2468
Dana Point (8) vs. SD South Bay (71)	-8.454	No	ns	>0.9999
Mission Bay (18) vs. Oceanside (7)	9.810	No	ns	>0.9999
Mission Bay (18) vs. SD North Bay (37)	-49.36	Yes	***	0.0003
Mission Bay (18) vs. SD South Bay (71)	-22.04	No	ns	0.4091
Oceanside (7) vs. SD North Bay (37)	-59.17	Yes	**	0.0044
Oceanside (7) vs. SD South Bay (71)	-31.85	No	ns	0.4906
SD North Bay (37) vs. SD South Bay (71)	27.32	Yes	**	0.0097

Statistical Comparisons for Fish Tissue Chemistry by Harbor, Guild, and Species-

2018 Results

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total PCBs by Harbor-Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	42.27

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (9) vs. Mission Bay (14)	-8.762	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-6.619	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-36.33	Yes	***	0.0002
Dana Point (9) vs. SD South Bay (14)	-40.33	Yes	***	0.0001
Mission Bay (14) vs. Oceanside (14)	2.143	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-27.57	Yes	**	0.0016
Mission Bay (14) vs. SD South Bay (14)	-31.57	Yes	**	0.0010
Oceanside (14) vs. SD North Bay (23)	-29.71	Yes	***	0.0005
Oceanside (14) vs. SD South Bay (14)	-33.71	Yes	***	0.0003
SD North Bay (23) vs. SD South Bay (14)	-4.000	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total PCBs by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	45.65

Data summary	
Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (9) vs. Mission Bay (14)	-11.14	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-4.643	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-37.30	Yes	***	0.0001
Dana Point (9) vs. SD South Bay (14)	-41.86	Yes	****	<0.0001
Mission Bay (14) vs. Oceanside (14)	6.500	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-26.16	Yes	**	0.0033
Mission Bay (14) vs. SD South Bay (14)	-30.71	Yes	**	0.0016
Oceanside (14) vs. SD North Bay (23)	-32.66	Yes	****	<0.0001
Oceanside (14) vs. SD South Bay (14)	-37.21	Yes	****	<0.0001
SD North Bay (23) vs. SD South Bay (14)	-4.553	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total DDTs by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0405
Exact or approximate P value?	Approximate
P value summary	*
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	9.995

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	11.50	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-13.61	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	0.6739	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	3.643	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	-25.11	Yes	*	0.0201
Mission Bay (14) vs. SD North Bay (23)	-10.83	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	-7.857	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	14.28	No	ns	0.5008
Oceanside (14) vs. SD South Bay (14)	17.25	No	ns	0.3379
SD North Bay (23) vs. SD South Bay (14)	2.969	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total DDTs by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	0.0355
Exact or approximate P value?	Approximate
P value summary	*
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	10.31

Data summary	
Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (9) vs. Mission Bay (14)	17.40	No	ns	0.5831
Dana Point (9) vs. Oceanside (14)	-6.817	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	5.068	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	10.75	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	-24.21	Yes	*	0.0289
Mission Bay (14) vs. SD North Bay (23)	-12.33	No	ns	0.9079
Mission Bay (14) vs. SD South Bay (14)	-6.643	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	11.89	No	ns	>0.9999
Oceanside (14) vs. SD South Bay (14)	17.57	No	ns	0.3064
SD North Bay (23) vs. SD South Bay (14)	5.686	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total Chlordanes by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.4662
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	3.578

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-12.44	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-0.4087	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-7.923	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	-5.552	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	12.04	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	4.522	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	6.893	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-7.514	No	ns	>0.9999
Oceanside (14) vs. SD South Bay (14)	-5.143	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	2.371	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total Chlordanes by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0061
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	14.39

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-15.06	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	10.01	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-11.47	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	-14.56	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	25.07	Yes	*	0.0204
Mission Bay (14) vs. SD North Bay (23)	3.590	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	0.5000	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-21.48	Yes	*	0.0321
Oceanside (14) vs. SD South Bay (14)	-24.57	Yes	*	0.0250
SD North Bay (23) vs. SD South Bay (14)	-3.090	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total Arsenic by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.7183
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	2.095

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-4.167	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-6.452	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-10.64	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	-9.774	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	-2.286	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-6.478	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	-5.607	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-4.193	No	ns	>0.9999
Oceanside (14) vs. SD South Bay (14)	-3.321	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	0.8711	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total Mercury by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	0.0629
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	8.928

Data summary	
Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (9) vs. Mission Bay (14)	-5.540	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-1.183	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-14.76	No	ns	0.8082
Dana Point (9) vs. SD South Bay (14)	-19.83	No	ns	0.3095
Mission Bay (14) vs. Oceanside (14)	4.357	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-9.224	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	-14.29	No	ns	0.7883
Oceanside (14) vs. SD North Bay (23)	-13.58	No	ns	0.6247
Oceanside (14) vs. SD South Bay (14)	-18.64	No	ns	0.2182
SD North Bay (23) vs. SD South Bay (14)	-5.062	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total Selenium by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0004
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	20.49

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-4.964	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-4.857	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-13.59	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	-33.93	Yes	**	0.0022
Mission Bay (14) vs. Oceanside (14)	0.1071	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-8.623	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	-28.96	Yes	**	0.0037
Oceanside (14) vs. SD North Bay (23)	-8.730	No	ns	>0.9999
Oceanside (14) vs. SD South Bay (14)	-29.07	Yes	**	0.0035
SD North Bay (23) vs. SD South Bay (14)	-20.34	No	ns	0.0526

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total PBDEs by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0539
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	9.307

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-1.333	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-5.690	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-19.16	No	ns	0.2053
Dana Point (9) vs. SD South Bay (14)	-10.83	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	-4.357	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-17.83	No	ns	0.1242
Mission Bay (14) vs. SD South Bay (14)	-9.500	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-13.47	No	ns	0.5890
Oceanside (14) vs. SD South Bay (14)	-5.143	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	8.326	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Harbor
2018 Results

Total PBDEs by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0136
Exact or approximate P value?	Approximate
P value summary	*
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	12.57

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-4.643	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-1.714	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-22.30	No	ns	0.0834
Dana Point (9) vs. SD South Bay (14)	-12.50	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	2.929	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-17.66	No	ns	0.1541
Mission Bay (14) vs. SD South Bay (14)	-7.857	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-20.59	Yes	*	0.0474
Oceanside (14) vs. SD South Bay (14)	-10.79	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	9.804	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total PCBs by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	28.45

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	18.90	No	ns	0.7391
Forage - Planktivores (8) vs. Predator - Inverts (15)	47.50	Yes	****	<0.0001
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	35.54	Yes	****	<0.0001
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	28.60	No	ns	0.0601
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	16.64	No	ns	0.6017
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-11.96	No	ns	0.3690

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total PCBs by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	26.03

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	0.8500	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	41.85	Yes	****	<0.0001
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	21.25	No	ns	0.0594
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	41.00	Yes	**	0.0013
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	20.40	No	ns	0.2638
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-20.60	Yes	**	0.0076

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total DDTs by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0114
Exact or approximate P value?	Approximate
P value summary	*
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	11.05

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	7.350	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	21.15	No	ns	0.1479
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	24.88	Yes	*	0.0151
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	13.80	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	17.53	No	ns	0.5003
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	3.730	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total DDTs by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0038
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	13.44

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-37.13	Yes	*	0.0148
Forage - Planktivores (8) vs. Predator - Inverts (15)	1.808	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	-8.821	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	38.93	Yes	**	0.0027
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	28.30	Yes	*	0.0311
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-10.63	No	ns	0.5788

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total Chlordanes by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	23.39

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	35.05	Yes	*	0.0127
Forage - Planktivores (8) vs. Predator - Inverts (15)	35.35	Yes	***	0.0003
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	36.54	Yes	****	<0.0001
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	0.3000	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	1.493	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	1.193	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total Chlordanes by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0002
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	19.84

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	17.50	No	ns	0.9208
Forage - Planktivores (8) vs. Predator - Inverts (15)	39.97	Yes	***	0.0001
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	30.11	Yes	**	0.0015
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	22.47	No	ns	0.2584
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	12.61	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-9.858	No	ns	0.7389

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total Arsenic by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.1555
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	4
Kruskal-Wallis statistic	5.232

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	26.54	No	ns	0.1825
Forage - Planktivores (8) vs. Predator - Inverts (15)	13.44	No	ns	0.9210
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	15.15	No	ns	0.3949
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	-13.10	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	-11.38	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	1.717	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total Mercury by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	35.13

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-21.30	No	ns	0.4940
Forage - Planktivores (8) vs. Predator - Inverts (15)	1.100	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	-31.83	Yes	***	0.0007
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	22.40	No	ns	0.2622
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	-10.53	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-32.93	Yes	****	<0.0001

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total Selenium by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	21.39

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-4.713	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	34.65	Yes	**	0.0014
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	12.04	No	ns	0.8641
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	39.37	Yes	**	0.0024
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	16.75	No	ns	0.5889
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-22.62	Yes	**	0.0024

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total PBDEs by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0105
Exact or approximate P value?	Approximate
P value summary	*
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	11.23

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-9.875	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	20.69	No	ns	0.1479
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	14.64	No	ns	0.4159
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	30.57	Yes	*	0.0294
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	24.51	No	ns	0.0800
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-6.056	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Guild
2018 Results

Total PBDEs by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0013
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	15.66

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-25.80	No	ns	0.2121
Forage - Planktivores (8) vs. Predator - Inverts (15)	16.93	No	ns	0.4326
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	1.304	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	42.73	Yes	***	0.0007
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	27.10	Yes	*	0.0446
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-15.63	No	ns	0.0871

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total PCBs by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0002
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	48.67

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-3.667	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	11.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	2.333	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-11.67	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	15.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-15.27	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-2.667	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	5.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-32.42	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-23.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-7.067	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	12.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-8.417	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-35.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	31.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	6.410	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	32.67	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	23.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-2.167	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	15.33	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	6.000	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Corbina (1)	-8.000	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	19.00	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-11.60	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	1.000	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	9.000	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-28.75	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-20.00	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-3.400	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	16.00	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-4.750	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-32.25	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	34.67	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	10.08	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	36.33	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	27.00	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	1.500	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-9.333	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-23.33	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	3.667	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-26.93	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-14.33	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-6.333	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-44.08	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-35.33	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-18.73	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	0.6667	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-20.08	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-47.58	No	ns	0.7159
Black Perch (3) vs. Spotfin Croaker (3)	19.33	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-5.256	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	21.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	11.67	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-13.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	-14.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	13.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	-17.60	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	-5.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	3.000	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	-34.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	-26.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	-9.400	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	10.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	-10.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	-38.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	28.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	4.077	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	30.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	21.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	-4.500	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	27.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-3.600	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	9.000	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	17.00	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-20.75	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-12.00	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	4.600	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	24.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	3.250	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-24.25	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	42.67	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	18.08	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	44.33	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	35.00	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	9.500	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-30.60	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-18.00	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-10.00	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-47.75	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-39.00	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-22.40	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-3.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-23.75	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-51.25	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	15.67	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-8.923	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	17.33	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Surfperch (4)	8.000	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-17.50	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	12.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	20.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-17.15	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	-8.400	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	8.200	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	27.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	6.850	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-20.65	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	46.27	No	ns	0.6119
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	21.68	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	47.93	No	ns	0.4319
Pacific Chub Mackerel (5) vs. White Surfperch (4)	38.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	13.10	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	8.000	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-29.75	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-21.00	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-4.400	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	15.00	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-5.750	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-33.25	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	33.67	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	9.077	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	35.33	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	26.00	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	0.5000	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-37.75	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	-29.00	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	-12.40	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	7.000	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	-13.75	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-41.25	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	25.67	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	1.077	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	27.33	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	18.00	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-7.500	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Queenfish (3)	8.750	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	25.35	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	44.75	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	24.00	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-3.500	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	63.42	Yes	*	0.0215
Northern Anchovy (4) vs. Spotted Sand Bass (13)	38.83	No	ns	0.3023
Northern Anchovy (4) vs. White Croaker (3)	65.08	Yes	*	0.0141
Northern Anchovy (4) vs. White Surfperch (4)	55.75	Yes	*	0.0468
Northern Anchovy (4) vs. Yellowfin Croaker (6)	30.25	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	16.60	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	36.00	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	15.25	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-12.25	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	54.67	No	ns	0.3516
Queenfish (3) vs. Spotted Sand Bass (13)	30.08	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	56.33	No	ns	0.2538
Queenfish (3) vs. White Surfperch (4)	47.00	No	ns	0.8013
Queenfish (3) vs. Yellowfin Croaker (6)	21.50	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	19.40	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-1.350	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-28.85	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	38.07	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	13.48	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	39.73	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	30.40	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	4.900	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	-20.75	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-48.25	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	18.67	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	-5.923	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	20.33	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	11.00	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-14.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-27.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	39.42	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	14.83	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	41.08	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Surfperch (4)	31.75	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	6.250	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	66.92	Yes	**	0.0088
Slough Anchovy (4) vs. Spotted Sand Bass (13)	42.33	No	ns	0.1096
Slough Anchovy (4) vs. White Croaker (3)	68.58	Yes	**	0.0057
Slough Anchovy (4) vs. White Surfperch (4)	59.25	Yes	*	0.0186
Slough Anchovy (4) vs. Yellowfin Croaker (6)	33.75	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-24.59	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	1.667	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	-7.667	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-33.17	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	26.26	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	16.92	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-8.577	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-9.333	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-34.83	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-25.50	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total PCBs by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0034
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	39.87

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-16.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	12.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-11.67	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-1.667	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	4.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-23.07	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	6.000	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-15.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-15.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-16.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-10.47	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	6.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	13.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-32.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	28.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-1.590	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	29.67	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	21.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-6.000	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	28.83	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	4.500	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	14.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	20.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-6.900	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	22.17	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	1.000	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	0.5000	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-0.1667	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	5.700	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	22.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	29.50	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-16.00	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	44.83	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	14.58	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	45.83	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	37.50	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	10.17	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-24.33	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-14.33	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-8.333	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-35.73	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-6.667	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-27.83	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-28.33	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-29.00	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-23.13	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-6.333	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	0.6667	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-44.83	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	16.00	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-14.26	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	17.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	8.667	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-18.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	10.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	16.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	-11.40	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	17.67	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	-3.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	-4.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	-4.667	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	1.200	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	18.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	25.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	-20.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	40.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	10.08	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	41.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	33.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	5.667	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	6.000	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-21.40	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	7.667	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-13.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-14.00	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-14.67	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-8.800	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	8.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	15.00	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-30.50	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	30.33	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	0.07692	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	31.33	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	23.00	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-4.333	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-27.40	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	1.667	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-19.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-20.00	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-20.67	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-14.80	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	2.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	9.000	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-36.50	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	24.33	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-5.923	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Croaker (3)	25.33	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	17.00	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-10.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	29.07	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	7.900	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	7.400	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	6.733	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	12.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	29.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	36.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-9.100	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	51.73	No	ns	0.1877
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	21.48	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	52.73	No	ns	0.1494
Pacific Chub Mackerel (5) vs. White Surfperch (4)	44.40	No	ns	0.3964
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	17.07	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-21.17	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-21.67	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-22.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-16.47	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	0.3333	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	7.333	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-38.17	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	22.67	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	-7.590	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	23.67	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	15.33	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-12.00	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-0.5000	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	-1.167	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	4.700	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	21.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	28.50	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-17.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	43.83	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	13.58	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	44.83	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	36.50	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Leopard Shark (2) vs. Yellowfin Croaker (6)	9.167	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-0.6667	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	5.200	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	22.00	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	29.00	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-16.50	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	44.33	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	14.08	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	45.33	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	37.00	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	9.667	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	5.867	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	22.67	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	29.67	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-15.83	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	45.00	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	14.74	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	46.00	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	37.67	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	10.33	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	16.80	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	23.80	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-21.70	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	39.13	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	8.877	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	40.13	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	31.80	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	4.467	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	7.000	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-38.50	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	22.33	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	-7.923	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	23.33	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	15.00	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-12.33	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-45.50	No	ns	0.5265
Shiner Surfperch (4) vs. Spotfin Croaker (3)	15.33	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-14.92	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Croaker (3)	16.33	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	8.000	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-19.33	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	60.83	Yes	*	0.0404
Slough Anchovy (4) vs. Spotted Sand Bass (13)	30.58	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	61.83	Yes	*	0.0317
Slough Anchovy (4) vs. White Surfperch (4)	53.50	No	ns	0.0826
Slough Anchovy (4) vs. Yellowfin Croaker (6)	26.17	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-30.26	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	1.000	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	-7.333	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-34.67	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	31.26	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	22.92	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-4.410	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-8.333	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-35.67	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-27.33	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total DDTs by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0004
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	46.61

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	26.75	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	14.83	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-25.50	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	11.50	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	-9.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-5.900	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-15.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	6.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-11.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	4.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	41.50	No	ns	0.2728
Barred Sand Bass (6) vs. Salema (1)	3.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-19.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-15.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	21.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	20.81	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	16.33	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	21.38	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-0.5000	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-11.92	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-52.25	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-15.25	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Halibut (1)	-36.25	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-32.65	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-42.25	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-20.25	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-38.00	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-21.92	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	14.75	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-23.25	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-46.25	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-42.00	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	-5.750	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-5.942	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	-10.42	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	-5.375	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-27.25	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-40.33	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-3.333	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-24.33	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-20.73	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-30.33	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-8.333	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-26.08	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-10.00	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	26.67	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-11.33	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-34.33	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-30.08	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	6.167	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	5.974	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	1.500	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	6.542	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-15.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	37.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	16.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	19.60	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	10.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	32.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	14.25	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Queenfish (3)	30.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	67.00	No	ns	0.8453
Brown Smooth-hound Shark (1) vs. Salema (1)	29.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	6.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	10.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	46.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	46.31	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	41.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	46.88	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	25.00	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	-21.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-17.40	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-27.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-5.000	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-22.75	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-6.667	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	30.00	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-8.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	-31.00	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-26.75	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	9.500	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	9.308	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	4.833	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	9.875	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-12.00	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	3.600	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-6.000	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	16.00	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-1.750	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	14.33	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	51.00	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	13.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-10.00	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-5.750	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	30.50	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	30.31	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	25.83	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	30.88	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. Yellowfin Croaker (6)	9.000	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	-9.600	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	12.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-5.350	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	10.73	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	47.40	No	ns	0.0933
Pacific Chub Mackerel (5) vs. Salema (1)	9.400	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	-13.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-9.350	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	26.90	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	26.71	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	22.23	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	27.28	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	5.400	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	22.00	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	4.250	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	20.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	57.00	No	ns	0.0539
Kelp Bass (3) vs. Salema (1)	19.00	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-4.000	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	0.2500	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	36.50	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	36.31	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	31.83	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	36.88	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	15.00	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-17.75	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	-1.667	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	35.00	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	-3.000	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	-26.00	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-21.75	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	14.50	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	14.31	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	9.833	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	14.88	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-7.000	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	16.08	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Round Stingray (5)	52.75	Yes	*	0.0485
Northern Anchovy (4) vs. Salema (1)	14.75	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-8.250	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-4.000	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	32.25	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	32.06	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	27.58	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	32.63	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	10.75	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	36.67	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-1.333	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-24.33	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-20.08	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	16.17	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	15.97	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	11.50	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	16.54	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-5.333	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-38.00	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-61.00	Yes	**	0.0045
Round Stingray (5) vs. Slough Anchovy (4)	-56.75	Yes	*	0.0158
Round Stingray (5) vs. Spotfin Croaker (3)	-20.50	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	-20.69	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	-25.17	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	-20.13	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-42.00	No	ns	0.2387
Salema (1) vs. Shiner Surfperch (4)	-23.00	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-18.75	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	17.50	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	17.31	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	12.83	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	17.88	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-4.000	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	4.250	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	40.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	40.31	No	ns	0.1983
Shiner Surfperch (4) vs. White Croaker (3)	35.83	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	40.88	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. Yellowfin Croaker (6)	19.00	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	36.25	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	36.06	No	ns	0.6381
Slough Anchovy (4) vs. White Croaker (3)	31.58	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	36.63	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	14.75	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-0.1923	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-4.667	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	0.3750	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-21.50	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	-4.474	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	0.5673	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-21.31	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	5.042	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-16.83	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-21.88	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total DDTs by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0002
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	48.34

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	4.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	19.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-27.17	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	31.83	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	-20.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-20.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	1.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-22.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	26.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	8.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	43.83	No	ns	0.1449
Barred Sand Bass (6) vs. Salema (1)	-2.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	17.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	7.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	16.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	18.22	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	-8.833	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	26.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-5.167	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	14.83	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-31.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	27.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	-24.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-24.50	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-3.167	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-27.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	22.25	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	3.833	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	39.50	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-6.500	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	13.25	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	3.000	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	12.17	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	13.88	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	-13.17	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	22.25	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-9.500	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-46.33	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	12.67	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-39.33	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-39.33	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-18.00	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-41.83	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	7.417	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-11.00	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	24.67	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-21.33	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-1.583	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-11.83	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-2.667	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-0.9487	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	-28.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	7.417	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-24.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	59.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	7.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	7.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	28.33	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	4.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	53.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	35.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	71.00	No	ns	0.4902
Brown Smooth-hound Shark (1) vs. Salema (1)	25.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	44.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	34.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	43.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	45.38	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	18.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	53.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	22.00	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	-52.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-52.00	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-30.67	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-54.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-5.250	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-23.67	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	12.00	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-34.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	-14.25	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-24.50	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	-15.33	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-13.62	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	-40.67	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	-5.250	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-37.00	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	0.000	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	21.33	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-2.500	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	46.75	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	28.33	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	64.00	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	18.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	37.75	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	27.50	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	36.67	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	38.38	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Croaker (3)	11.33	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	46.75	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	15.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	21.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-2.500	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	46.75	No	ns	0.2267
Pacific Chub Mackerel (5) vs. Queenfish (3)	28.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	64.00	Yes	***	0.0005
Pacific Chub Mackerel (5) vs. Salema (1)	18.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	37.75	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	27.50	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	36.67	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	38.38	No	ns	0.1320
Pacific Chub Mackerel (5) vs. White Croaker (3)	11.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	46.75	No	ns	0.2267
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	15.00	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-23.83	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	25.42	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	7.000	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	42.67	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-3.333	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	16.42	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	6.167	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	15.33	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	17.05	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	-10.00	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	25.42	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-6.333	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	49.25	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	30.83	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	66.50	Yes	*	0.0416
Leopard Shark (2) vs. Salema (1)	20.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	40.25	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	30.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	39.17	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	40.88	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	13.83	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	49.25	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Leopard Shark (2) vs. Yellowfin Croaker (6)	17.50	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-18.42	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	17.25	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-28.75	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-9.000	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-19.25	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	-10.08	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	-8.365	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	-35.42	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	0.000	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-31.75	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	35.67	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-10.33	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	9.417	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-0.8333	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	8.333	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	10.05	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	-17.00	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	18.42	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-13.33	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-46.00	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-26.25	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-36.50	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	-27.33	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	-25.62	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	-52.67	No	ns	0.1517
Round Stingray (5) vs. White Surfperch (4)	-17.25	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-49.00	Yes	*	0.0319
Salema (1) vs. Shiner Surfperch (4)	19.75	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	9.500	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	18.67	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	20.38	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	-6.667	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	28.75	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-3.000	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-10.25	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	-1.083	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	0.6346	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Croaker (3)	-26.42	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	9.000	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-22.75	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	9.167	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	10.88	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	-16.17	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	19.25	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-12.50	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	1.718	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-25.33	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	10.08	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-21.67	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	-27.05	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	8.365	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-23.38	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	35.42	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	3.667	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-31.75	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total Chlordanes by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0001
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	50.54

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-20.00	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-19.00	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	3.300	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	4.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-33.75	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-9.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	13.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-26.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-26.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-29.75	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	6.231	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-3.333	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	0.000	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-38.50	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Corbina (1)	-37.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	0.000	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-15.20	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-14.17	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	0.000	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-52.25	No	ns	0.4850
Black Croaker (2) vs. Queenfish (3)	-27.67	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-5.500	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-44.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-44.75	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-48.25	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-12.27	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	0.000	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	0.000	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-38.50	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-37.50	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	0.000	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-15.20	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-14.17	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	0.000	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-52.25	No	ns	0.1185
Black Perch (3) vs. Queenfish (3)	-27.67	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-5.500	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-44.50	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-44.75	No	ns	0.6441
Black Perch (3) vs. Slough Anchovy (4)	-48.25	No	ns	0.3007
Black Perch (3) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-12.27	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	0.000	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	0.000	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	1.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	38.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	23.30	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	24.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	38.50	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	-13.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	10.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	33.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	-6.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	-6.250	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	-9.750	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	38.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	26.23	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	38.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	38.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	16.67	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	37.50	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	22.30	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	23.33	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	37.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-14.75	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	9.833	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	32.00	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-7.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	-7.250	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-10.75	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	37.50	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	25.23	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	37.50	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	37.50	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	15.67	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-15.20	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-14.17	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	0.000	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-52.25	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-27.67	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-5.500	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-44.50	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-44.75	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-48.25	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-12.27	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	0.000	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Surfperch (4)	0.000	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	1.033	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	15.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-37.05	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	-12.47	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	9.700	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-29.30	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	-29.55	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-33.05	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	15.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	2.931	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	15.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	15.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-6.633	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	14.17	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-38.08	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-13.50	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	8.667	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-30.33	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-30.58	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-34.08	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	14.17	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	1.897	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	14.17	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	14.17	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-7.667	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-52.25	No	ns	0.4850
Leopard Shark (2) vs. Queenfish (3)	-27.67	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	-5.500	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	-44.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	-44.75	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-48.25	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	-12.27	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	0.000	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	0.000	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Queenfish (3)	24.58	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	46.75	No	ns	0.0935
Northern Anchovy (4) vs. Salema (1)	7.750	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	7.500	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	4.000	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	52.25	No	ns	0.1185
Northern Anchovy (4) vs. Spotted Sand Bass (13)	39.98	No	ns	0.0895
Northern Anchovy (4) vs. White Croaker (3)	52.25	No	ns	0.1185
Northern Anchovy (4) vs. White Surfperch (4)	52.25	Yes	*	0.0418
Northern Anchovy (4) vs. Yellowfin Croaker (6)	30.42	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	22.17	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-16.83	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-17.08	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-20.58	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	27.67	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	15.40	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	27.67	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	27.67	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	5.833	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-39.00	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-39.25	No	ns	0.6526
Round Stingray (5) vs. Slough Anchovy (4)	-42.75	No	ns	0.2733
Round Stingray (5) vs. Spotfin Croaker (3)	5.500	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	-6.769	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	5.500	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	5.500	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-16.33	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	-0.2500	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-3.750	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	44.50	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	32.23	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	44.50	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	44.50	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	22.67	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-3.500	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	44.75	No	ns	0.6441
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	32.48	No	ns	0.8552
Shiner Surfperch (4) vs. White Croaker (3)	44.75	No	ns	0.6441

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Surfperch (4)	44.75	No	ns	0.2950
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	22.92	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	48.25	No	ns	0.3007
Slough Anchovy (4) vs. Spotted Sand Bass (13)	35.98	No	ns	0.3136
Slough Anchovy (4) vs. White Croaker (3)	48.25	No	ns	0.3007
Slough Anchovy (4) vs. White Surfperch (4)	48.25	No	ns	0.1224
Slough Anchovy (4) vs. Yellowfin Croaker (6)	26.42	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-12.27	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	0.000	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	0.000	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	12.27	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	12.27	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-9.564	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	0.000	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-21.83	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total Chlordanes by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0021
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	41.48

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-9.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	14.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-47.17	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-26.17	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	2.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-21.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	21.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-25.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-37.42	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-10.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	0.4333	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-43.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-10.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-39.92	No	ns	0.7666
Barred Sand Bass (6) vs. Spotfin Croaker (3)	5.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-12.47	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	-9.500	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	10.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-16.50	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	23.67	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-38.00	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-17.00	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	12.00	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-12.00	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	30.33	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-16.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-28.25	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-1.000	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	9.600	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-34.00	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-1.000	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-30.75	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	15.00	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-3.308	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	-0.3333	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	19.75	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-7.333	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-61.67	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-40.67	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-11.67	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-35.67	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	6.667	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-39.67	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-51.92	No	ns	0.2990
Black Perch (3) vs. Queenfish (3)	-24.67	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-14.07	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-57.67	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-24.67	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-54.42	No	ns	0.1754
Black Perch (3) vs. Spotfin Croaker (3)	-8.667	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-26.97	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	-24.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-3.917	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-31.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	21.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	50.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	26.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	68.33	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	22.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	9.750	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	37.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	47.60	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	4.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	37.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	7.250	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	53.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	34.69	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	37.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	57.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	30.67	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	29.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	5.000	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	47.33	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	1.000	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-11.25	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	16.00	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	26.60	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-17.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	16.00	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-13.75	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	32.00	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	13.69	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	16.67	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	36.75	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	9.667	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-24.00	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	18.33	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-28.00	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-40.25	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-13.00	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-2.400	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-46.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-13.00	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-42.75	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	3.000	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-15.31	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Croaker (3)	-12.33	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	7.750	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-19.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	42.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-4.000	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-16.25	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	11.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	21.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-22.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	11.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-18.75	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	27.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	8.692	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	11.67	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	31.75	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	4.667	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-46.33	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-58.58	No	ns	0.0687
Kelp Bass (3) vs. Queenfish (3)	-31.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-20.73	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-64.33	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-31.33	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-61.08	Yes	*	0.0380
Kelp Bass (3) vs. Spotfin Croaker (3)	-15.33	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	-33.64	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	-30.67	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	-10.58	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-37.67	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-12.25	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	15.00	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	25.60	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	-18.00	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	15.00	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-14.75	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	31.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	12.69	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	15.67	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	35.75	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Leopard Shark (2) vs. Yellowfin Croaker (6)	8.667	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	27.25	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	37.85	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-5.750	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	27.25	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-2.500	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	43.25	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	24.94	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	27.92	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	48.00	No	ns	0.3034
Northern Anchovy (4) vs. Yellowfin Croaker (6)	20.92	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	10.60	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-33.00	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	0.000	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-29.75	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	16.00	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	-2.308	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	0.6667	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	20.75	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-6.333	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-43.60	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-10.60	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-40.35	No	ns	0.9802
Round Stingray (5) vs. Spotfin Croaker (3)	5.400	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	-12.91	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	-9.933	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	10.15	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-16.93	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	33.00	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	3.250	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	49.00	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	30.69	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	33.67	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	53.75	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	26.67	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-29.75	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	16.00	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-2.308	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Croaker (3)	0.6667	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	20.75	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-6.333	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	45.75	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	27.44	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	30.42	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	50.50	No	ns	0.1705
Slough Anchovy (4) vs. Yellowfin Croaker (6)	23.42	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-18.31	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-15.33	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	4.750	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-22.33	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	2.974	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	23.06	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-4.026	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	20.08	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-7.000	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-27.08	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total Arsenic by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0001
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	50.16

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	22.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	8.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-28.83	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-30.83	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	19.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	18.27	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-8.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-27.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-18.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	4.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-25.23	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-9.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	8.667	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	1.542	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	-9.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	21.97	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	40.50	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	13.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	16.08	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-13.83	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-51.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-53.50	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Halibut (1)	-3.500	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-4.400	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-31.17	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-50.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-40.75	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-17.83	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-47.90	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-32.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-14.00	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-21.13	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	-32.50	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-0.6923	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	17.83	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	-8.750	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-6.583	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-37.67	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-39.67	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	10.33	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	9.433	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-17.33	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-36.17	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-26.92	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-4.000	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-34.07	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-18.67	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-0.1667	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-7.292	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-18.67	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	13.14	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	31.67	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	5.083	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	7.250	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	-2.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	48.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	47.10	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	20.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	1.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	10.75	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Queenfish (3)	33.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	3.600	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	19.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	37.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	30.38	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	19.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	50.81	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	69.33	No	ns	0.9948
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	42.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	44.92	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	50.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	49.10	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	22.33	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	3.500	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	12.75	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	35.67	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	5.600	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	21.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	39.50	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	32.38	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	21.00	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	52.81	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	71.33	No	ns	0.7733
California Corbina (1) vs. White Surfperch (4)	44.75	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	46.92	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-0.9000	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-27.67	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-46.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-37.25	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-14.33	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-44.40	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-29.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-10.50	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-17.63	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	-29.00	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	2.808	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	21.33	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	-5.250	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. Yellowfin Croaker (6)	-3.083	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	-26.77	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-45.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-36.35	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	-13.43	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	-43.50	No	ns	0.2626
Pacific Chub Mackerel (5) vs. Salema (1)	-28.10	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	-9.600	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-16.73	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	-28.10	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	3.708	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	22.23	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	-4.350	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-2.183	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-18.83	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-9.583	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	13.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-16.73	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-1.333	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	17.17	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	10.04	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	-1.333	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	30.47	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	49.00	No	ns	0.9994
Kelp Bass (3) vs. White Surfperch (4)	22.42	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	24.58	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	9.250	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	32.17	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	2.100	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	17.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	36.00	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	28.88	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	17.50	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	49.31	No	ns	0.4823
Leopard Shark (2) vs. White Croaker (3)	67.83	No	ns	0.1044
Leopard Shark (2) vs. White Surfperch (4)	41.25	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	43.42	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	22.92	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Round Stingray (5)	-7.150	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	8.250	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	26.75	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	19.63	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	8.250	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	40.06	No	ns	0.2133
Northern Anchovy (4) vs. White Croaker (3)	58.58	No	ns	0.0687
Northern Anchovy (4) vs. White Surfperch (4)	32.00	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	34.17	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	-30.07	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-14.67	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	3.833	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-3.292	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	-14.67	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	17.14	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	35.67	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	9.083	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	11.25	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	15.40	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	33.90	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	26.78	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	15.40	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	47.21	Yes	**	0.0057
Round Stingray (5) vs. White Croaker (3)	65.73	Yes	**	0.0054
Round Stingray (5) vs. White Surfperch (4)	39.15	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	41.32	No	ns	0.2868
Salema (1) vs. Shiner Surfperch (4)	18.50	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	11.38	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	31.81	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	50.33	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	23.75	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	25.92	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-7.125	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	-18.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	13.31	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	31.83	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	5.250	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. Yellowfin Croaker (6)	7.417	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	-11.38	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	20.43	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	38.96	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	12.38	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	14.54	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	31.81	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	50.33	No	ns	0.7883
Spotfin Croaker (3) vs. White Surfperch (4)	23.75	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	25.92	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	18.53	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	-8.058	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-5.891	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-26.58	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-24.42	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	2.167	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total Mercury by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	57.12

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-28.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	26.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-32.67	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	20.33	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	23.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	1.533	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	4.333	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-34.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	31.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-14.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-21.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-25.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	30.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	14.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	34.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-5.128	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	-11.33	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	20.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-10.33	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	54.83	No	ns	0.9920
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-4.500	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Corbina (1)	48.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	51.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	29.70	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	32.50	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-6.000	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	59.50	No	ns	0.2660
Black Croaker (2) vs. Queenfish (3)	14.17	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	6.500	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	2.500	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	58.25	No	ns	0.3349
Black Croaker (2) vs. Slough Anchovy (4)	42.50	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	62.50	No	ns	0.2764
Black Croaker (2) vs. Spotted Sand Bass (13)	23.04	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	16.83	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	48.50	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	17.83	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-59.33	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-6.333	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-3.333	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-25.13	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-22.33	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-60.83	No	ns	0.3693
Black Perch (3) vs. Northern Anchovy (4)	4.667	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-40.67	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-48.33	No	ns	0.3967
Black Perch (3) vs. Salema (1)	-52.33	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	3.417	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-12.33	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	7.667	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-31.79	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	-38.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-6.333	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-37.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	53.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	56.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	34.20	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	37.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	-1.500	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	64.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	18.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	11.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	7.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	62.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	47.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	67.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	27.54	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	21.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	53.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	22.33	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	3.000	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-18.80	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-16.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-54.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	11.00	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-34.33	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-42.00	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-46.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	9.750	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-6.000	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	14.00	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-25.46	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	-31.67	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	0.000	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-30.67	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-21.80	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-19.00	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-57.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	8.000	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-37.33	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-45.00	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-49.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	6.750	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-9.000	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	11.00	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-28.46	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	-34.67	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Surfperch (4)	-3.000	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-33.67	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	2.800	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-35.70	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	29.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	-15.53	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	-23.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-27.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	28.55	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	12.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	32.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	-6.662	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	-12.87	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	18.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-11.87	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-38.50	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	27.00	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-18.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-26.00	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-30.00	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	25.75	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	10.00	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	30.00	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	-9.462	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	-15.67	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	16.00	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-14.67	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	65.50	No	ns	0.0830
Leopard Shark (2) vs. Queenfish (3)	20.17	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	12.50	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	8.500	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	64.25	No	ns	0.1066
Leopard Shark (2) vs. Slough Anchovy (4)	48.50	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	68.50	No	ns	0.0921
Leopard Shark (2) vs. Spotted Sand Bass (13)	29.04	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	22.83	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	54.50	No	ns	0.6519
Leopard Shark (2) vs. Yellowfin Croaker (6)	23.83	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Queenfish (3)	-45.33	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	-53.00	Yes	*	0.0454
Northern Anchovy (4) vs. Salema (1)	-57.00	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-1.250	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-17.00	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	3.000	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	-36.46	No	ns	0.5747
Northern Anchovy (4) vs. White Croaker (3)	-42.67	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	-11.00	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-41.67	No	ns	0.5104
Queenfish (3) vs. Round Stingray (5)	-7.667	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-11.67	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	44.08	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	28.33	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	48.33	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	8.872	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	2.667	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	34.33	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	3.667	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-4.000	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	51.75	No	ns	0.0635
Round Stingray (5) vs. Slough Anchovy (4)	36.00	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	56.00	No	ns	0.0690
Round Stingray (5) vs. Spotted Sand Bass (13)	16.54	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	10.33	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	42.00	No	ns	0.6839
Round Stingray (5) vs. Yellowfin Croaker (6)	11.33	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	55.75	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	40.00	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	60.00	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	20.54	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	14.33	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	46.00	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	15.33	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-15.75	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	4.250	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-35.21	No	ns	0.7959
Shiner Surfperch (4) vs. White Croaker (3)	-41.42	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Surfperch (4)	-9.750	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-40.42	No	ns	0.6835
Slough Anchovy (4) vs. Spotfin Croaker (3)	20.00	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	-19.46	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	-25.67	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	6.000	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-24.67	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-39.46	No	ns	0.7929
Spotfin Croaker (3) vs. White Croaker (3)	-45.67	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	-14.00	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-44.67	No	ns	0.6291
Spotted Sand Bass (13) vs. White Croaker (3)	-6.205	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	25.46	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-5.205	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	31.67	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	1.000	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-30.67	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total Selenium by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	57.73

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-1.750	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	38.42	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	36.75	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	14.25	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	26.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-11.15	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-3.083	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	30.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-4.125	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	37.42	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-25.55	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	21.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	26.88	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-8.750	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	19.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-2.442	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	42.75	No	ns	0.9374
Barred Sand Bass (6) vs. White Surfperch (4)	30.38	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	8.583	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	40.17	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	38.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	16.00	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Halibut (1)	28.00	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-9.400	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-1.333	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	32.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-2.375	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	39.17	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-23.80	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	23.00	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	28.63	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-7.000	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	21.00	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-0.6923	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	44.50	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	32.13	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	10.33	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-1.667	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-24.17	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-12.17	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-49.57	No	ns	0.3038
Black Perch (3) vs. Kelp Bass (3)	-41.50	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-8.167	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-42.54	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-1.000	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-63.97	Yes	**	0.0088
Black Perch (3) vs. Salema (1)	-17.17	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-11.54	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-47.17	No	ns	0.7757
Black Perch (3) vs. Spotfin Croaker (3)	-19.17	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-40.86	No	ns	0.5726
Black Perch (3) vs. White Croaker (3)	4.333	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-8.042	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-29.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	-22.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	-10.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	-47.90	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	-39.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	-6.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	-40.88	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Queenfish (3)	0.6667	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	-62.30	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	-15.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	-9.875	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	-45.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	-17.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	-39.19	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	6.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	-6.375	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	-28.17	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	12.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-25.40	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-17.33	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	16.00	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-18.38	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	23.17	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-39.80	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	7.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	12.63	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-23.00	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	5.000	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-16.69	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	28.50	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	16.13	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-5.667	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-37.40	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-29.33	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	4.000	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-30.38	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	11.17	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-51.80	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-5.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	0.6250	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-35.00	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	-7.000	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-28.69	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	16.50	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	4.125	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. Yellowfin Croaker (6)	-17.67	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	8.067	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	41.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	7.025	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	48.57	No	ns	0.3772
Pacific Chub Mackerel (5) vs. Round Stingray (5)	-14.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	32.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	38.03	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	2.400	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	30.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	8.708	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	53.90	No	ns	0.1138
Pacific Chub Mackerel (5) vs. White Surfperch (4)	41.53	No	ns	0.7592
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	19.73	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	33.33	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-1.042	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	40.50	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-22.47	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	24.33	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	29.96	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-5.667	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	22.33	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	0.6410	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	45.83	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	33.46	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	11.67	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-34.38	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	7.167	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	-55.80	No	ns	0.3660
Leopard Shark (2) vs. Salema (1)	-9.000	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	-3.375	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-39.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	-11.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	-32.69	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	12.50	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	0.1250	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-21.67	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	41.54	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Round Stingray (5)	-21.43	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	25.38	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	31.00	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-4.625	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	23.38	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	1.683	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	46.88	No	ns	0.8204
Northern Anchovy (4) vs. White Surfperch (4)	34.50	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	12.71	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	-62.97	Yes	*	0.0116
Queenfish (3) vs. Salema (1)	-16.17	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-10.54	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-46.17	No	ns	0.9389
Queenfish (3) vs. Spotfin Croaker (3)	-18.17	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	-39.86	No	ns	0.7233
Queenfish (3) vs. White Croaker (3)	5.333	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	-7.042	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-28.83	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	46.80	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	52.43	No	ns	0.0530
Round Stingray (5) vs. Slough Anchovy (4)	16.80	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	44.80	No	ns	0.8239
Round Stingray (5) vs. Spotted Sand Bass (13)	23.11	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	68.30	Yes	**	0.0026
Round Stingray (5) vs. White Surfperch (4)	55.93	Yes	*	0.0201
Round Stingray (5) vs. Yellowfin Croaker (6)	34.13	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	5.625	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-30.00	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	-2.000	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	-23.69	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	21.50	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	9.125	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-12.67	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-35.63	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	-7.625	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-29.32	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	15.88	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	3.500	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-18.29	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	28.00	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	6.308	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	51.50	No	ns	0.3259
Slough Anchovy (4) vs. White Surfperch (4)	39.13	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	17.33	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-21.69	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	23.50	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	11.13	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-10.67	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	45.19	No	ns	0.1966
Spotted Sand Bass (13) vs. White Surfperch (4)	32.82	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	11.03	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-12.38	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-34.17	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-21.79	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total PBDEs by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0002
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	48.85

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	7.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	0.5833	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-45.25	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	15.25	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	15.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-31.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-36.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-29.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-17.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-20.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-3.050	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-12.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-26.63	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-25.75	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	15.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	4.019	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	10.75	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	15.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-24.75	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-6.917	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-52.75	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	7.750	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. California Halibut (1)	7.750	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-38.75	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-44.42	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-36.75	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-24.50	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-28.08	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-10.55	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-19.75	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-34.13	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-33.25	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	7.750	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-3.481	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	3.250	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	7.750	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-32.25	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-45.83	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	14.67	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	14.67	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-31.83	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-37.50	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-29.83	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-17.58	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-21.17	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-3.633	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-12.83	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-27.21	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-26.33	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	14.67	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	3.436	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	10.17	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	14.67	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-25.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	60.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	60.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	14.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	8.333	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	16.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	28.25	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Queenfish (3)	24.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	42.20	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	33.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	18.63	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	19.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	60.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	49.27	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	56.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	60.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	20.50	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	0.000	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-46.50	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-52.17	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-44.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-32.25	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-35.83	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-18.30	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-27.50	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	-41.88	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-41.00	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-11.23	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	-4.500	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	0.000	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-40.00	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-46.50	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-52.17	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-44.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-32.25	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-35.83	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-18.30	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-27.50	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-41.88	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-41.00	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	0.000	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-11.23	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	-4.500	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	0.000	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. Yellowfin Croaker (6)	-40.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	-5.667	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	2.000	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	14.25	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	10.67	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	28.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	19.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	4.625	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	5.500	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	46.50	No	ns	0.4693
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	35.27	No	ns	0.2739
Pacific Chub Mackerel (5) vs. White Croaker (3)	42.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	46.50	No	ns	0.1867
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	6.500	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	7.667	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	19.92	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	16.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	33.87	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	24.67	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	10.29	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	11.17	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	52.17	No	ns	0.4534
Kelp Bass (3) vs. Spotted Sand Bass (13)	40.94	No	ns	0.4520
Kelp Bass (3) vs. White Croaker (3)	47.67	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	52.17	No	ns	0.2215
Kelp Bass (3) vs. Yellowfin Croaker (6)	12.17	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	12.25	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	8.667	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	26.20	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	17.00	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	2.625	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	3.500	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	44.50	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	33.27	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	40.00	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	44.50	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	4.500	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-3.583	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Northern Anchovy (4) vs. Round Stingray (5)	13.95	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	4.750	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-9.625	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-8.750	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	32.25	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	21.02	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	27.75	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	32.25	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-7.750	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	17.53	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	8.333	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-6.042	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-5.167	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	35.83	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	24.60	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	31.33	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	35.83	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-4.167	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-9.200	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-23.58	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-22.70	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	18.30	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	7.069	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	13.80	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	18.30	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-21.70	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	-14.38	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-13.50	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	27.50	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	16.27	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	23.00	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	27.50	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-12.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	0.8750	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	41.88	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	30.64	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	37.38	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	41.88	No	ns	0.9258

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. Yellowfin Croaker (6)	1.875	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	41.00	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	29.77	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	36.50	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	41.00	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	1.000	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-11.23	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-4.500	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	0.000	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-40.00	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	6.731	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	11.23	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-28.77	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	4.500	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-35.50	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-40.00	No	ns	0.6117

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Total PBDEs by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0002
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	48.96

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-2.000	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	-0.8333	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-46.50	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	25.50	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	12.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-38.30	No	ns	0.6214
Barred Sand Bass (6) vs. Kelp Bass (3)	-29.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-43.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-5.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-30.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-2.900	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-28.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-4.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-19.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	14.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-2.808	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	1.500	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	18.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-31.67	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	1.167	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-44.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	27.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	14.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-36.30	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-27.50	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-41.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-3.500	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-28.50	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-0.9000	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-26.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-2.500	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-17.50	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	16.50	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-0.8077	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	3.500	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	20.00	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-29.67	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-45.67	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	26.33	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	13.33	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-37.47	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-28.67	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-42.17	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-4.667	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-29.67	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-2.067	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-27.67	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-3.667	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-18.67	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	15.33	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-1.974	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	2.333	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	18.83	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-30.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	72.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	59.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	8.200	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	17.00	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	3.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	41.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	16.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	43.60	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	18.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	42.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	27.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	61.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	43.69	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	48.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	64.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	14.83	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	-13.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-63.80	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-55.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-68.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-31.00	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-56.00	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-28.40	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-54.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	-30.00	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-45.00	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	-11.00	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-28.31	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	-24.00	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	-7.500	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-57.17	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-50.80	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-42.00	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-55.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-18.00	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-43.00	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-15.40	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-41.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-17.00	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-32.00	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	2.000	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-15.31	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

California Halibut (1) vs. White Croaker (3)	-11.00	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	5.500	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-44.17	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	8.800	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-4.700	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	32.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	7.800	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	35.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	9.800	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	33.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	18.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	52.80	No	ns	0.1471
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	35.49	No	ns	0.3252
Pacific Chub Mackerel (5) vs. White Croaker (3)	39.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	56.30	Yes	*	0.0181
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	6.633	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-13.50	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	24.00	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-1.000	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	26.60	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	1.000	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	25.00	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	10.00	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	44.00	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	26.69	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	31.00	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	47.50	No	ns	0.7276
Kelp Bass (3) vs. Yellowfin Croaker (6)	-2.167	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	37.50	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	12.50	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	40.10	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	14.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	38.50	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	23.50	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	57.50	No	ns	0.6463
Leopard Shark (2) vs. Spotted Sand Bass (13)	40.19	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	44.50	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	61.00	No	ns	0.2006

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Leopard Shark (2) vs. Yellowfin Croaker (6)	11.33	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-25.00	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	2.600	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-23.00	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	1.000	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-14.00	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	20.00	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	2.692	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	7.000	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	23.50	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-26.17	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	27.60	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	2.000	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	26.00	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	11.00	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	45.00	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	27.69	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	32.00	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	48.50	No	ns	0.5984
Queenfish (3) vs. Yellowfin Croaker (6)	-1.167	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-25.60	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-1.600	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-16.60	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	17.40	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	0.09231	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	4.400	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	20.90	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-28.77	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	24.00	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	9.000	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	43.00	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	25.69	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	30.00	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	46.50	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	-3.167	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-15.00	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	19.00	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	1.692	No	ns	>0.9999

Statistical Comparisons for Tissue Chemistry by Species
2018 Results

Shiner Surfperch (4) vs. White Croaker (3)	6.000	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	22.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-27.17	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	34.00	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	16.69	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	21.00	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	37.50	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-12.17	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-17.31	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-13.00	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	3.500	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-46.17	No	ns	0.4557
Spotted Sand Bass (13) vs. White Croaker (3)	4.308	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	20.81	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-28.86	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	16.50	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-33.17	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-49.67	No	ns	0.0658

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor, Guild, and Species-2018 Results

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total PCBs by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	40.01

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-30.10	Yes	*	0.0106
Dana Point (9) vs. Oceanside (14)	-22.27	No	ns	0.1534
Dana Point (9) vs. SD North Bay (23)	10.92	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	-8.738	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	7.821	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	41.02	Yes	****	<0.0001
Mission Bay (14) vs. SD South Bay (14)	21.36	No	ns	0.0860
Oceanside (14) vs. SD North Bay (23)	33.19	Yes	****	<0.0001
Oceanside (14) vs. SD South Bay (14)	13.54	No	ns	0.9586
SD North Bay (23) vs. SD South Bay (14)	-19.66	No	ns	0.0700

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total DDTs by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	40.71

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-16.32	No	ns	0.7567
Dana Point (9) vs. Oceanside (14)	-11.36	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	12.96	No	ns	>0.9999
Dana Point (9) vs. SD South Bay (14)	27.54	Yes	*	0.0273
Mission Bay (14) vs. Oceanside (14)	4.964	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	29.28	Yes	***	0.0006
Mission Bay (14) vs. SD South Bay (14)	43.86	Yes	****	<0.0001
Oceanside (14) vs. SD North Bay (23)	24.31	Yes	**	0.0085
Oceanside (14) vs. SD South Bay (14)	38.89	Yes	****	<0.0001
SD North Bay (23) vs. SD South Bay (14)	14.58	No	ns	0.4551

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total Chlordanes by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	54.66

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-2.448	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-20.84	No	ns	0.2331
Dana Point (9) vs. SD North Bay (23)	29.16	Yes	**	0.0056
Dana Point (9) vs. SD South Bay (14)	17.37	No	ns	0.5864
Mission Bay (14) vs. Oceanside (14)	-18.39	No	ns	0.2364
Mission Bay (14) vs. SD North Bay (23)	31.61	Yes	***	0.0001
Mission Bay (14) vs. SD South Bay (14)	19.82	No	ns	0.1474
Oceanside (14) vs. SD North Bay (23)	50.00	Yes	****	<0.0001
Oceanside (14) vs. SD South Bay (14)	38.21	Yes	****	<0.0001
SD North Bay (23) vs. SD South Bay (14)	-11.79	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total Arsenic by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.1543
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	5
Kruskal-Wallis statistic	6.672

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-6.758	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-5.258	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-17.03	No	ns	0.4402
Dana Point (9) vs. SD South Bay (14)	-16.69	No	ns	0.6933
Mission Bay (14) vs. Oceanside (14)	1.500	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-10.27	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	-9.929	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-11.77	No	ns	>0.9999
Oceanside (14) vs. SD South Bay (14)	-11.43	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	0.3401	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total Mercury by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0002
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	22.40

Data summary

Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Dana Point (9) vs. Mission Bay (14)	-0.02381	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	21.48	No	ns	0.1938
Dana Point (9) vs. SD North Bay (23)	29.18	Yes	**	0.0056
Dana Point (9) vs. SD South Bay (14)	14.30	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	21.50	No	ns	0.0815
Mission Bay (14) vs. SD North Bay (23)	29.20	Yes	***	0.0006
Mission Bay (14) vs. SD South Bay (14)	14.32	No	ns	0.7799
Oceanside (14) vs. SD North Bay (23)	7.705	No	ns	>0.9999
Oceanside (14) vs. SD South Bay (14)	-7.179	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	-14.88	No	ns	0.4113

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total Selenium by Harbor- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	52.39

Data summary	
Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (9) vs. Mission Bay (14)	-12.70	No	ns	>0.9999
Dana Point (9) vs. Oceanside (14)	-12.84	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-40.97	Yes	****	<0.0001
Dana Point (9) vs. SD South Bay (14)	-50.16	Yes	****	<0.0001
Mission Bay (14) vs. Oceanside (14)	-0.1429	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-28.27	Yes	**	0.0011
Mission Bay (14) vs. SD South Bay (14)	-37.46	Yes	****	<0.0001
Oceanside (14) vs. SD North Bay (23)	-28.13	Yes	**	0.0011
Oceanside (14) vs. SD South Bay (14)	-37.32	Yes	****	<0.0001
SD North Bay (23) vs. SD South Bay (14)	-9.194	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Harbor
2018 Results

BSAFs for Total PBDEs by Harbor- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	0.0015
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	5
Kruskal-Wallis statistic	17.59

Data summary	
Number of treatments (columns)	5
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Dana Point (9) vs. Mission Bay (14)	-19.40	No	ns	0.3474
Dana Point (9) vs. Oceanside (14)	-7.397	No	ns	>0.9999
Dana Point (9) vs. SD North Bay (23)	-29.87	Yes	**	0.0041
Dana Point (9) vs. SD South Bay (14)	-11.93	No	ns	>0.9999
Mission Bay (14) vs. Oceanside (14)	12.00	No	ns	>0.9999
Mission Bay (14) vs. SD North Bay (23)	-10.48	No	ns	>0.9999
Mission Bay (14) vs. SD South Bay (14)	7.464	No	ns	>0.9999
Oceanside (14) vs. SD North Bay (23)	-22.48	Yes	*	0.0205
Oceanside (14) vs. SD South Bay (14)	-4.536	No	ns	>0.9999
SD North Bay (23) vs. SD South Bay (14)	17.94	No	ns	0.1385

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total PCBs by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.9804
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	4
Kruskal-Wallis statistic	0.1821

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-4.575	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	-3.208	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	-3.082	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	1.367	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	1.493	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	0.1268	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total DDTs by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0083
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	11.74

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-35.98	Yes	*	0.0201
Forage - Planktivores (8) vs. Predator - Inverts (15)	-28.08	Yes	*	0.0172
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	-22.93	Yes	*	0.0323
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	7.900	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	13.05	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	5.146	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total Chlordanes by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.4426
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	4
Kruskal-Wallis statistic	2.686

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	9.038	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	-6.729	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	1.916	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	-15.77	No	ns	0.9340
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	-7.122	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	8.645	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total Arsenic by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0803
Exact or approximate P value?	Approximate
P value summary	ns
Do the medians vary signif. (P < 0.05)?	No
Number of groups	4
Kruskal-Wallis statistic	6.750

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	27.44	No	ns	0.1512
Forage - Planktivores (8) vs. Predator - Inverts (15)	20.60	No	ns	0.1717
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	18.35	No	ns	0.1554
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	-6.833	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	-9.087	No	ns	>0.9999
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-2.254	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total Mercury by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	26.04

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-20.70	No	ns	0.5474
Forage - Planktivores (8) vs. Predator - Inverts (15)	-15.20	No	ns	0.6380
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	-36.23	Yes	****	<0.0001
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	5.500	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	-15.53	No	ns	0.7504
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-21.03	Yes	**	0.0060

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total Selenium by Guild- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	24.60

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	0.2875	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Inverts (15)	39.29	Yes	***	0.0002
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	14.81	No	ns	0.4336
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	39.00	Yes	**	0.0027
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	14.52	No	ns	0.9098
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-24.48	Yes	***	0.0008

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Guild
2018 Results

BSAFs for Total PBDEs by Guild- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0096
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	4
Kruskal-Wallis statistic	11.43

Data summary

Number of treatments (columns)	4
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Forage - Planktivores (8) vs. Forage - Mesocarnivore (5)	-23.89	No	ns	0.3080
Forage - Planktivores (8) vs. Predator - Inverts (15)	12.85	No	ns	>0.9999
Forage - Planktivores (8) vs. Predator - Mesocarnivore (46)	-0.2853	No	ns	>0.9999
Forage - Mesocarnivore (5) vs. Predator - Inverts (15)	36.73	Yes	**	0.0056
Forage - Mesocarnivore (5) vs. Predator - Mesocarnivore (46)	23.60	No	ns	0.1185
Predator - Inverts (15) vs. Predator - Mesocarnivore (46)	-13.13	No	ns	0.2399

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total PCBs by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0075
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	37.20

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	19.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	16.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-29.00	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-27.00	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	-22.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	4.800	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	42.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	22.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	18.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	28.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	12.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-24.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	5.250	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	0.2500	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	14.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	2.231	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	28.67	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	0.5000	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-17.50	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Black Perch (3)	-2.333	No	ns	>0.9999
Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-48.00	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-46.00	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	-41.00	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-14.20	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	23.00	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	3.500	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-0.5000	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	9.667	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-6.500	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-43.00	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-13.75	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-18.75	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	-4.500	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-16.77	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	9.667	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	-18.50	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-36.50	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-45.67	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-43.67	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-38.67	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-11.87	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	25.33	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	5.833	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	1.833	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	12.00	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-4.167	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-40.67	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-11.42	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-16.42	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-2.167	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-14.44	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	12.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-16.17	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-34.17	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	2.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	7.000	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	33.80	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	71.00	No	ns	0.8071
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	51.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	47.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	57.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	41.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	5.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	34.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	29.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	43.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	31.23	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	57.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	29.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	11.50	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	5.000	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	31.80	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	69.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	49.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	45.50	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	55.67	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	39.50	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	3.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	32.25	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	27.25	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	41.50	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	29.23	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	55.67	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	27.50	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	9.500	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	26.80	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	64.00	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	44.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	40.50	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	50.67	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	34.50	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-2.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	27.25	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Slough Anchovy (4)	22.25	No	ns	>0.9999
California Halibut (1) vs. Spotfin Croaker (3)	36.50	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	24.23	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	50.67	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	22.50	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	4.500	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	37.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	17.70	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	13.70	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	23.87	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	7.700	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-28.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	0.4500	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-4.550	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	9.700	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	-2.569	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	23.87	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	-4.300	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-22.30	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-19.50	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-23.50	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-13.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-29.50	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-66.00	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-36.75	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-41.75	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	-27.50	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	-39.77	No	ns	0.7387
Kelp Bass (3) vs. White Croaker (3)	-13.33	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	-41.50	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-59.50	Yes	*	0.0173
Leopard Shark (2) vs. Northern Anchovy (4)	-4.000	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	6.167	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	-10.00	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	-46.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	-17.25	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-22.25	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotfin Croaker (3)	-8.000	No	ns	>0.9999
Leopard Shark (2) vs. Spotted Sand Bass (13)	-20.27	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	6.167	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	-22.00	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-40.00	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	10.17	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	-6.000	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-42.50	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-13.25	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-18.25	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	-4.000	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	-16.27	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	10.17	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	-18.00	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-36.00	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	-16.17	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-52.67	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-23.42	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-28.42	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	-14.17	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	-26.44	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	0.000	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	-28.17	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-46.17	No	ns	0.4556
Round Stingray (5) vs. Salema (1)	-36.50	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-7.250	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-12.25	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	2.000	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	-10.27	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	16.17	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	-12.00	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-30.00	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	29.25	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	24.25	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	38.50	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	26.23	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	52.67	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. White Surfperch (4)	24.50	No	ns	>0.9999
Salema (1) vs. Yellowfin Croaker (6)	6.500	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-5.000	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	9.250	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-3.019	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	23.42	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	-4.750	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-22.75	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	14.25	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	1.981	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	28.42	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	0.2500	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-17.75	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-12.27	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	14.17	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	-14.00	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-32.00	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	26.44	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	-1.731	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-19.73	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-28.17	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-46.17	No	ns	0.4556
White Surfperch (4) vs. Yellowfin Croaker (6)	-18.00	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total DDTs by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0011
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	43.40

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	23.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	9.083	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-29.25	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-20.25	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	-21.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-6.350	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	15.75	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-2.000	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	33.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	13.42	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	39.75	No	ns	0.4312
Barred Sand Bass (6) vs. Salema (1)	-26.25	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	4.125	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	26.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	7.917	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	12.02	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	-4.583	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	-4.500	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-15.42	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-14.17	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-52.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-43.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	-44.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-29.60	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-7.500	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-25.25	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	10.00	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-9.833	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	16.50	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-49.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-19.13	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	2.750	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	-15.33	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-11.23	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	-27.83	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	-27.75	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-38.67	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-38.33	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-29.33	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-30.33	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-15.43	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	6.667	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-11.08	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	24.17	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	4.333	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	30.67	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-35.33	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-4.958	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	16.92	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-1.167	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	2.936	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	-13.67	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-13.58	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-24.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	9.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	8.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	22.90	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	45.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	27.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	62.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	42.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	69.00	No	ns	0.6462
Brown Smooth-hound Shark (1) vs. Salema (1)	3.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	33.38	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	55.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	37.17	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	41.27	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	24.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	24.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	13.83	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	-1.000	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	13.90	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	36.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	18.25	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	53.50	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	33.67	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	60.00	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-6.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	24.38	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	46.25	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	28.17	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	32.27	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	15.67	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	15.75	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	4.833	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	14.90	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	37.00	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	19.25	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	54.50	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	34.67	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	61.00	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-5.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	25.38	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	47.25	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Spotfin Croaker (3)	29.17	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	33.27	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	16.67	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	16.75	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	5.833	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	22.10	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	4.350	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	39.60	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	19.77	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	46.10	No	ns	0.1331
Pacific Chub Mackerel (5) vs. Salema (1)	-19.90	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	10.48	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	32.35	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	14.27	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	18.37	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	1.767	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	1.850	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-9.067	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-17.75	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	17.50	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-2.333	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	24.00	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-42.00	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-11.63	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	10.25	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	-7.833	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	-3.731	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	-20.33	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	-20.25	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-31.17	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	35.25	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	15.42	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	41.75	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	-24.25	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	6.125	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	28.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	9.917	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotted Sand Bass (13)	14.02	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	-2.583	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	-2.500	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-13.42	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-19.83	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	6.500	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-59.50	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-29.13	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-7.250	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	-25.33	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	-21.23	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	-37.83	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	-37.75	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-48.67	No	ns	0.0865
Queenfish (3) vs. Round Stingray (5)	26.33	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-39.67	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-9.292	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	12.58	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	-5.500	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	-1.397	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	-18.00	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	-17.92	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-28.83	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-66.00	No	ns	0.9661
Round Stingray (5) vs. Shiner Surfperch (4)	-35.63	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-13.75	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	-31.83	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	-27.73	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	-44.33	No	ns	0.9044
Round Stingray (5) vs. White Surfperch (4)	-44.25	No	ns	0.4104
Round Stingray (5) vs. Yellowfin Croaker (6)	-55.17	Yes	**	0.0043
Salema (1) vs. Shiner Surfperch (4)	30.38	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	52.25	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	34.17	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	38.27	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	21.67	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	21.75	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. Yellowfin Croaker (6)	10.83	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	21.88	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	3.792	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	7.894	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	-8.708	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	-8.625	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-19.54	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	-18.08	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	-13.98	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	-30.58	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	-30.50	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-41.42	No	ns	0.5413
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	4.103	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-12.50	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	-12.42	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-23.33	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	-16.60	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	-16.52	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-27.44	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	0.08333	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-10.83	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-10.92	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total Chlordanes by Species- Lipid Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test	
P value	0.0039
Exact or approximate P value?	Approximate
P value summary	**
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	39.43

Data summary	
Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	**Mean rank diff.**	**Significant?**	**Summary**	**Adjusted P Value**
Barred Sand Bass (6) vs. Black Croaker (2)	27.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	24.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-18.17	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-8.167	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	-26.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	15.93	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	42.83	No	ns	0.9214
Barred Sand Bass (6) vs. Leopard Shark (2)	20.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	9.583	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	33.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	27.33	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-17.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-0.4167	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	4.208	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	-23.50	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	4.449	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	-6.333	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	4.833	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-7.083	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-3.167	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-45.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-35.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	-53.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-11.40	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	15.50	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-6.750	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-17.75	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	6.167	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	0.000	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-44.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-27.75	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-23.13	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	-50.83	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-22.88	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	-33.67	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	-22.50	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-34.42	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-42.33	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-32.33	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-50.33	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-8.233	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	18.67	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-3.583	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-14.58	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	9.333	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	3.167	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-41.33	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-24.58	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-19.96	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-47.67	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-19.72	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	-30.50	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-19.33	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-31.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	10.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	-8.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	34.10	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	61.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	38.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	27.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	51.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	45.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	1.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	17.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	22.38	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	-5.333	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	22.62	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	11.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	23.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	11.08	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	-18.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	24.10	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	51.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	28.75	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	17.75	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	41.67	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	35.50	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-9.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	7.750	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	12.38	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	-15.33	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	12.62	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	1.833	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	13.00	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	1.083	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	42.10	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	69.00	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	46.75	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	35.75	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	59.67	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	53.50	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	9.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	25.75	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	30.38	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Spotfin Croaker (3)	2.667	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	30.62	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	19.83	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	31.00	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	19.08	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	26.90	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	4.650	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-6.350	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	17.57	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	11.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-33.10	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	-16.35	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-11.73	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	-39.43	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	-11.48	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	-22.27	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	-11.10	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-23.02	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-22.25	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-33.25	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-9.333	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-15.50	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-60.00	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-43.25	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-38.63	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	-66.33	Yes	*	0.0301
Kelp Bass (3) vs. Spotted Sand Bass (13)	-38.38	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	-49.17	No	ns	0.9704
Kelp Bass (3) vs. White Surfperch (4)	-38.00	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-49.92	No	ns	0.1954
Leopard Shark (2) vs. Northern Anchovy (4)	-11.00	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	12.92	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	6.750	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	-37.75	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	-21.00	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-16.38	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	-44.08	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotted Sand Bass (13)	-16.13	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	-26.92	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	-15.75	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	-27.67	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	23.92	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	17.75	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-26.75	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	-10.00	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-5.375	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	-33.08	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	-5.135	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	-15.92	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	-4.750	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-16.67	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	-6.167	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-50.67	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	-33.92	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-29.29	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	-57.00	No	ns	0.2221
Queenfish (3) vs. Spotted Sand Bass (13)	-29.05	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	-39.83	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	-28.67	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-40.58	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-44.50	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	-27.75	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-23.13	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	-50.83	No	ns	0.2296
Round Stingray (5) vs. Spotted Sand Bass (13)	-22.88	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	-33.67	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	-22.50	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-34.42	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	16.75	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	21.38	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	-6.333	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	21.62	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	10.83	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	22.00	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. Yellowfin Croaker (6)	10.08	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	4.625	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	-23.08	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	4.865	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	-5.917	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	5.250	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-6.667	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	-27.71	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	0.2404	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	-10.54	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	0.6250	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-11.29	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	27.95	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	17.17	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	28.33	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	16.42	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	-10.78	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	0.3846	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-11.53	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	11.17	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-0.7500	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-11.92	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total Arsenic by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	51.16

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	19.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	10.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-27.42	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-31.42	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	19.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	15.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-11.75	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-27.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-18.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	0.9167	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-26.42	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-9.417	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	11.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-5.792	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	-3.417	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	21.51	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	40.42	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	16.83	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	16.08	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-8.500	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-46.50	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	-50.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	0.5000	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-4.000	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-30.83	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-47.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-38.00	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-18.17	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-45.50	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-28.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-8.000	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-24.88	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	-22.50	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	2.423	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	21.33	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	-2.250	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-3.000	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-38.00	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-42.00	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	9.000	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	4.500	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-22.33	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-38.50	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-29.50	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-9.667	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-37.00	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-20.00	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	0.5000	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-16.38	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-14.00	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	10.92	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	29.83	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	6.250	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	5.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	-4.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	47.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	42.50	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	15.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	-0.5000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	8.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	28.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	1.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	18.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	38.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	21.63	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	24.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	48.92	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	67.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	44.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	43.50	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	51.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	46.50	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	19.67	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	3.500	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	12.50	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	32.33	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	5.000	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	22.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	42.50	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	25.63	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	28.00	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	52.92	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	71.83	No	ns	0.7249
California Corbina (1) vs. White Surfperch (4)	48.25	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	47.50	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-4.500	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-31.33	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-47.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-38.50	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-18.67	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-46.00	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-29.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-8.500	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-25.38	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Spotfin Croaker (3)	-23.00	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	1.923	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	20.83	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	-2.750	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-3.500	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	-26.83	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-43.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	-34.00	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	-14.17	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	-41.50	No	ns	0.4326
Pacific Chub Mackerel (5) vs. Salema (1)	-24.50	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	-4.000	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-20.88	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	-18.50	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	6.423	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	25.33	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	1.750	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	1.000	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-16.17	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	-7.167	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	12.67	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-14.67	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	2.333	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	22.83	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	5.958	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	8.333	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	33.26	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	52.17	No	ns	0.5636
Kelp Bass (3) vs. White Surfperch (4)	28.58	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	27.83	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	9.000	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	28.83	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	1.500	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	18.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	39.00	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	22.13	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	24.50	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotted Sand Bass (13)	49.42	No	ns	0.4709
Leopard Shark (2) vs. White Croaker (3)	68.33	No	ns	0.0949
Leopard Shark (2) vs. White Surfperch (4)	44.75	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	44.00	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	19.83	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	-7.500	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	9.500	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	30.00	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	13.13	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	15.50	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	40.42	No	ns	0.1919
Northern Anchovy (4) vs. White Croaker (3)	59.33	No	ns	0.0576
Northern Anchovy (4) vs. White Surfperch (4)	35.75	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	35.00	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	-27.33	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-10.33	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	10.17	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-6.708	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	-4.333	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	20.59	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	39.50	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	15.92	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	15.17	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	17.00	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	37.50	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	20.63	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	23.00	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	47.92	Yes	**	0.0043
Round Stingray (5) vs. White Croaker (3)	66.83	Yes	**	0.0040
Round Stingray (5) vs. White Surfperch (4)	43.25	No	ns	0.5158
Round Stingray (5) vs. Yellowfin Croaker (6)	42.50	No	ns	0.2087
Salema (1) vs. Shiner Surfperch (4)	20.50	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	3.625	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	6.000	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	30.92	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	49.83	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	26.25	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. Yellowfin Croaker (6)	25.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-16.88	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	-14.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	10.42	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	29.33	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	5.750	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	5.000	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	2.375	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	27.30	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	46.21	No	ns	0.9309
Slough Anchovy (4) vs. White Surfperch (4)	22.63	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	21.88	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	24.92	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	43.83	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	20.25	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	19.50	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	18.91	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	-4.673	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-5.423	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-23.58	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-24.33	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-0.7500	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total Mercury by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	<0.0001
Exact or approximate P value?	Approximate
P value summary	****
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	55.21

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-13.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	17.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-35.08	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	-8.083	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	15.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	7.717	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	23.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-33.58	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	36.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	9.750	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-12.98	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-32.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	20.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	20.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	31.92	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-6.276	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	-29.08	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	-0.2083	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-17.25	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	30.67	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-22.00	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	5.000	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	29.00	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	20.80	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	36.17	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-20.50	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	49.25	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	22.83	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	0.1000	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-19.00	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	33.75	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	33.75	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	45.00	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	6.808	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	-16.00	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	12.88	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-4.167	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-52.67	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-25.67	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-1.667	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-9.867	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	5.500	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-51.17	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	18.58	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-7.833	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-30.57	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-49.67	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	3.083	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	3.083	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	14.33	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-23.86	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	-46.67	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	-17.79	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-34.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	27.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	51.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	42.80	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	58.17	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	1.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	71.25	No	ns	0.5766
Brown Smooth-hound Shark (1) vs. Queenfish (3)	44.83	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	22.10	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	3.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	55.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	55.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	67.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	28.81	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	6.000	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	34.88	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	17.83	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	24.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	15.80	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	31.17	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-25.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	44.25	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	17.83	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-4.900	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-24.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	28.75	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	28.75	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	40.00	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	1.808	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	-21.00	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	7.875	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-9.167	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-8.200	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	7.167	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-49.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	20.25	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-6.167	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-28.90	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-48.00	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	4.750	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	4.750	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Spotfin Croaker (3)	16.00	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-22.19	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	-45.00	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	-16.13	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-33.17	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	15.37	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-41.30	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	28.45	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	2.033	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	-20.70	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-39.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	12.95	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	12.95	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	24.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	-13.99	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	-36.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	-7.925	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	-24.97	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-56.67	No	ns	0.7382
Kelp Bass (3) vs. Northern Anchovy (4)	13.08	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-13.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-36.07	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-55.17	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	-2.417	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	-2.417	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	8.833	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	-29.36	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	-52.17	No	ns	0.5625
Kelp Bass (3) vs. White Surfperch (4)	-23.29	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-40.33	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	69.75	Yes	*	0.0341
Leopard Shark (2) vs. Queenfish (3)	43.33	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	20.60	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	1.500	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	54.25	No	ns	0.6786
Leopard Shark (2) vs. Slough Anchovy (4)	54.25	No	ns	0.6786
Leopard Shark (2) vs. Spotfin Croaker (3)	65.50	No	ns	0.1607

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotted Sand Bass (13)	27.31	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	4.500	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	33.38	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	16.33	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-26.42	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	-49.15	No	ns	0.1243
Northern Anchovy (4) vs. Salema (1)	-68.25	No	ns	0.8588
Northern Anchovy (4) vs. Shiner Surfperch (4)	-15.50	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-15.50	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	-4.250	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	-42.44	No	ns	0.1055
Northern Anchovy (4) vs. White Croaker (3)	-65.25	Yes	*	0.0134
Northern Anchovy (4) vs. White Surfperch (4)	-36.38	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-53.42	Yes	*	0.0225
Queenfish (3) vs. Round Stingray (5)	-22.73	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-41.83	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	10.92	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	10.92	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	22.17	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	-16.03	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	-38.83	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	-9.958	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-27.00	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-19.10	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	33.65	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	33.65	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	44.90	No	ns	0.8056
Round Stingray (5) vs. Spotted Sand Bass (13)	6.708	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	-16.10	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	12.78	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-4.267	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	52.75	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	52.75	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	64.00	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	25.81	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	3.000	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	31.88	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. Yellowfin Croaker (6)	14.83	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	0.000	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	11.25	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-26.94	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	-49.75	No	ns	0.4650
Shiner Surfperch (4) vs. White Surfperch (4)	-20.88	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-37.92	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	11.25	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	-26.94	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	-49.75	No	ns	0.4650
Slough Anchovy (4) vs. White Surfperch (4)	-20.88	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-37.92	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-38.19	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-61.00	No	ns	0.0971
Spotfin Croaker (3) vs. White Surfperch (4)	-32.13	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-49.17	No	ns	0.2318
Spotted Sand Bass (13) vs. White Croaker (3)	-22.81	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	6.067	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-10.97	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	28.88	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	11.83	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-17.04	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total Selenium by Species- Raw (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0001
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	50.64

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	-17.83	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	25.83	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	30.17	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	13.67	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	24.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-15.73	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-17.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	1.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-15.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	3.167	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-28.53	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	19.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	21.04	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-16.96	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	18.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-4.064	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	36.67	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	28.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	5.833	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	43.67	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	48.00	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	31.50	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	42.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	2.100	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	0.6667	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	19.00	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	2.750	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	21.00	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-10.70	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	37.50	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	38.88	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	0.8750	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	36.00	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	13.77	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	54.50	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	46.50	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	23.67	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	4.333	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	-12.17	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	-1.167	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-41.57	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-43.00	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-24.67	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-40.92	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-22.67	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	-54.37	No	ns	0.1018
Black Perch (3) vs. Salema (1)	-6.167	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	-4.792	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-42.79	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	-7.667	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	-29.90	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	10.83	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	2.833	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-20.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	-16.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	-5.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	-45.90	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	-47.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	-29.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	-45.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	-27.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	-58.70	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	-10.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	-9.125	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	-47.13	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	-12.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	-34.23	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	6.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	-1.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	-24.33	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	11.00	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-29.40	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-30.83	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-12.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-28.75	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-10.50	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-42.20	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	6.000	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	7.375	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-30.63	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	4.500	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-17.73	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	23.00	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	15.00	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-7.833	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-40.40	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-41.83	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-23.50	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-39.75	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-21.50	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-53.20	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-5.000	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-3.625	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-41.63	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Spotfin Croaker (3)	-6.500	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-28.73	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	12.00	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	4.000	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-18.83	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	-1.433	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	16.90	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	0.6500	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	18.90	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	-12.80	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	35.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	36.78	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	-1.225	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	33.90	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	11.67	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Croaker (3)	52.40	No	ns	0.1610
Pacific Chub Mackerel (5) vs. White Surfperch (4)	44.40	No	ns	0.3958
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	21.57	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	18.33	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	2.083	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	20.33	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	-11.37	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	36.83	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	38.21	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	0.2083	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	35.33	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	13.10	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	53.83	No	ns	0.4119
Kelp Bass (3) vs. White Surfperch (4)	45.83	No	ns	0.9989
Kelp Bass (3) vs. Yellowfin Croaker (6)	23.00	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	-16.25	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	2.000	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	-29.70	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	18.50	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	19.88	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	-18.13	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	17.00	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotted Sand Bass (13)	-5.231	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	35.50	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	27.50	No	ns	>0.9999
Leopard Shark (2) vs. Yellowfin Croaker (6)	4.667	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	18.25	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	-13.45	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	34.75	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	36.13	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-1.875	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	33.25	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	11.02	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	51.75	No	ns	0.3091
Northern Anchovy (4) vs. White Surfperch (4)	43.75	No	ns	0.7618
Northern Anchovy (4) vs. Yellowfin Croaker (6)	20.92	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	-31.70	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	16.50	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	17.88	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	-20.13	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	15.00	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	-7.231	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	33.50	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	25.50	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	2.667	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	48.20	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	49.58	No	ns	0.1118
Round Stingray (5) vs. Slough Anchovy (4)	11.58	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	46.70	No	ns	0.5587
Round Stingray (5) vs. Spotted Sand Bass (13)	24.47	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	65.20	Yes	**	0.0063
Round Stingray (5) vs. White Surfperch (4)	57.20	Yes	*	0.0139
Round Stingray (5) vs. Yellowfin Croaker (6)	34.37	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	1.375	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	-36.63	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	-1.500	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	-23.73	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	17.00	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	9.000	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. Yellowfin Croaker (6)	-13.83	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-38.00	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	-2.875	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	-25.11	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	15.63	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	7.625	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-15.21	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	35.13	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	12.89	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	53.63	No	ns	0.2078
Slough Anchovy (4) vs. White Surfperch (4)	45.63	No	ns	0.5117
Slough Anchovy (4) vs. Yellowfin Croaker (6)	22.79	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-22.23	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	18.50	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	10.50	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-12.33	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Croaker (3)	40.73	No	ns	0.5896
Spotted Sand Bass (13) vs. White Surfperch (4)	32.73	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	9.897	No	ns	>0.9999
White Croaker (3) vs. White Surfperch (4)	-8.000	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-30.83	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-22.83	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

BSAFs for Total PBDEs by Species- Lipid-Normalized (log transformed) – Kruskal-Wallis with Dunn's Multiple Comparisons Test

Kruskal-Wallis test

P value	0.0007
Exact or approximate P value?	Approximate
P value summary	***
Do the medians vary signif. (P < 0.05)?	Yes
Number of groups	20
Kruskal-Wallis statistic	44.84

Data summary

Number of treatments (columns)	20
Number of values (total)	74

Dunn's multiple comparisons test	Mean rank diff.	Significant?	Summary	Adjusted P Value
Barred Sand Bass (6) vs. Black Croaker (2)	0.3333	No	ns	>0.9999
Barred Sand Bass (6) vs. Black Perch (3)	-6.667	No	ns	>0.9999
Barred Sand Bass (6) vs. Brown Smooth-hound Shark (1)	-46.67	No	ns	>0.9999
Barred Sand Bass (6) vs. California Corbina (1)	10.33	No	ns	>0.9999
Barred Sand Bass (6) vs. California Halibut (1)	14.83	No	ns	>0.9999
Barred Sand Bass (6) vs. Pacific Chub Mackerel (5)	-34.87	No	ns	>0.9999
Barred Sand Bass (6) vs. Kelp Bass (3)	-28.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Leopard Shark (2)	-40.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Northern Anchovy (4)	-7.792	No	ns	>0.9999
Barred Sand Bass (6) vs. Queenfish (3)	-30.00	No	ns	>0.9999
Barred Sand Bass (6) vs. Round Stingray (5)	-5.467	No	ns	>0.9999
Barred Sand Bass (6) vs. Salema (1)	-36.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Shiner Surfperch (4)	-5.417	No	ns	>0.9999
Barred Sand Bass (6) vs. Slough Anchovy (4)	-14.17	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotfin Croaker (3)	16.67	No	ns	>0.9999
Barred Sand Bass (6) vs. Spotted Sand Bass (13)	-2.974	No	ns	>0.9999
Barred Sand Bass (6) vs. White Croaker (3)	8.333	No	ns	>0.9999
Barred Sand Bass (6) vs. White Surfperch (4)	14.08	No	ns	>0.9999
Barred Sand Bass (6) vs. Yellowfin Croaker (6)	-33.33	No	ns	>0.9999
Black Croaker (2) vs. Black Perch (3)	-7.000	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Black Croaker (2) vs. Brown Smooth-hound Shark (1)	-47.00	No	ns	>0.9999
Black Croaker (2) vs. California Corbina (1)	10.00	No	ns	>0.9999
Black Croaker (2) vs. California Halibut (1)	14.50	No	ns	>0.9999
Black Croaker (2) vs. Pacific Chub Mackerel (5)	-35.20	No	ns	>0.9999
Black Croaker (2) vs. Kelp Bass (3)	-29.00	No	ns	>0.9999
Black Croaker (2) vs. Leopard Shark (2)	-40.50	No	ns	>0.9999
Black Croaker (2) vs. Northern Anchovy (4)	-8.125	No	ns	>0.9999
Black Croaker (2) vs. Queenfish (3)	-30.33	No	ns	>0.9999
Black Croaker (2) vs. Round Stingray (5)	-5.800	No	ns	>0.9999
Black Croaker (2) vs. Salema (1)	-37.00	No	ns	>0.9999
Black Croaker (2) vs. Shiner Surfperch (4)	-5.750	No	ns	>0.9999
Black Croaker (2) vs. Slough Anchovy (4)	-14.50	No	ns	>0.9999
Black Croaker (2) vs. Spotfin Croaker (3)	16.33	No	ns	>0.9999
Black Croaker (2) vs. Spotted Sand Bass (13)	-3.308	No	ns	>0.9999
Black Croaker (2) vs. White Croaker (3)	8.000	No	ns	>0.9999
Black Croaker (2) vs. White Surfperch (4)	13.75	No	ns	>0.9999
Black Croaker (2) vs. Yellowfin Croaker (6)	-33.67	No	ns	>0.9999
Black Perch (3) vs. Brown Smooth-hound Shark (1)	-40.00	No	ns	>0.9999
Black Perch (3) vs. California Corbina (1)	17.00	No	ns	>0.9999
Black Perch (3) vs. California Halibut (1)	21.50	No	ns	>0.9999
Black Perch (3) vs. Pacific Chub Mackerel (5)	-28.20	No	ns	>0.9999
Black Perch (3) vs. Kelp Bass (3)	-22.00	No	ns	>0.9999
Black Perch (3) vs. Leopard Shark (2)	-33.50	No	ns	>0.9999
Black Perch (3) vs. Northern Anchovy (4)	-1.125	No	ns	>0.9999
Black Perch (3) vs. Queenfish (3)	-23.33	No	ns	>0.9999
Black Perch (3) vs. Round Stingray (5)	1.200	No	ns	>0.9999
Black Perch (3) vs. Salema (1)	-30.00	No	ns	>0.9999
Black Perch (3) vs. Shiner Surfperch (4)	1.250	No	ns	>0.9999
Black Perch (3) vs. Slough Anchovy (4)	-7.500	No	ns	>0.9999
Black Perch (3) vs. Spotfin Croaker (3)	23.33	No	ns	>0.9999
Black Perch (3) vs. Spotted Sand Bass (13)	3.692	No	ns	>0.9999
Black Perch (3) vs. White Croaker (3)	15.00	No	ns	>0.9999
Black Perch (3) vs. White Surfperch (4)	20.75	No	ns	>0.9999
Black Perch (3) vs. Yellowfin Croaker (6)	-26.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Corbina (1)	57.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. California Halibut (1)	61.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Pacific Chub Mackerel (5)	11.80	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Brown Smooth-hound Shark (1) vs. Kelp Bass (3)	18.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Leopard Shark (2)	6.500	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Northern Anchovy (4)	38.88	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Queenfish (3)	16.67	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Round Stingray (5)	41.20	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Salema (1)	10.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Shiner Surfperch (4)	41.25	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Slough Anchovy (4)	32.50	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotfin Croaker (3)	63.33	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Spotted Sand Bass (13)	43.69	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Croaker (3)	55.00	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. White Surfperch (4)	60.75	No	ns	>0.9999
Brown Smooth-hound Shark (1) vs. Yellowfin Croaker (6)	13.33	No	ns	>0.9999
California Corbina (1) vs. California Halibut (1)	4.500	No	ns	>0.9999
California Corbina (1) vs. Pacific Chub Mackerel (5)	-45.20	No	ns	>0.9999
California Corbina (1) vs. Kelp Bass (3)	-39.00	No	ns	>0.9999
California Corbina (1) vs. Leopard Shark (2)	-50.50	No	ns	>0.9999
California Corbina (1) vs. Northern Anchovy (4)	-18.13	No	ns	>0.9999
California Corbina (1) vs. Queenfish (3)	-40.33	No	ns	>0.9999
California Corbina (1) vs. Round Stingray (5)	-15.80	No	ns	>0.9999
California Corbina (1) vs. Salema (1)	-47.00	No	ns	>0.9999
California Corbina (1) vs. Shiner Surfperch (4)	-15.75	No	ns	>0.9999
California Corbina (1) vs. Slough Anchovy (4)	-24.50	No	ns	>0.9999
California Corbina (1) vs. Spotfin Croaker (3)	6.333	No	ns	>0.9999
California Corbina (1) vs. Spotted Sand Bass (13)	-13.31	No	ns	>0.9999
California Corbina (1) vs. White Croaker (3)	-2.000	No	ns	>0.9999
California Corbina (1) vs. White Surfperch (4)	3.750	No	ns	>0.9999
California Corbina (1) vs. Yellowfin Croaker (6)	-43.67	No	ns	>0.9999
California Halibut (1) vs. Pacific Chub Mackerel (5)	-49.70	No	ns	>0.9999
California Halibut (1) vs. Kelp Bass (3)	-43.50	No	ns	>0.9999
California Halibut (1) vs. Leopard Shark (2)	-55.00	No	ns	>0.9999
California Halibut (1) vs. Northern Anchovy (4)	-22.63	No	ns	>0.9999
California Halibut (1) vs. Queenfish (3)	-44.83	No	ns	>0.9999
California Halibut (1) vs. Round Stingray (5)	-20.30	No	ns	>0.9999
California Halibut (1) vs. Salema (1)	-51.50	No	ns	>0.9999
California Halibut (1) vs. Shiner Surfperch (4)	-20.25	No	ns	>0.9999
California Halibut (1) vs. Slough Anchovy (4)	-29.00	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

California Halibut (1) vs. Spotfin Croaker (3)	1.833	No	ns	>0.9999
California Halibut (1) vs. Spotted Sand Bass (13)	-17.81	No	ns	>0.9999
California Halibut (1) vs. White Croaker (3)	-6.500	No	ns	>0.9999
California Halibut (1) vs. White Surfperch (4)	-0.7500	No	ns	>0.9999
California Halibut (1) vs. Yellowfin Croaker (6)	-48.17	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Kelp Bass (3)	6.200	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Leopard Shark (2)	-5.300	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Northern Anchovy (4)	27.08	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Queenfish (3)	4.867	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Round Stingray (5)	29.40	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Salema (1)	-1.800	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Shiner Surfperch (4)	29.45	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Slough Anchovy (4)	20.70	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. Spotfin Croaker (3)	51.53	No	ns	0.1960
Pacific Chub Mackerel (5) vs. Spotted Sand Bass (13)	31.89	No	ns	0.9167
Pacific Chub Mackerel (5) vs. White Croaker (3)	43.20	No	ns	>0.9999
Pacific Chub Mackerel (5) vs. White Surfperch (4)	48.95	No	ns	0.1311
Pacific Chub Mackerel (5) vs. Yellowfin Croaker (6)	1.533	No	ns	>0.9999
Kelp Bass (3) vs. Leopard Shark (2)	-11.50	No	ns	>0.9999
Kelp Bass (3) vs. Northern Anchovy (4)	20.88	No	ns	>0.9999
Kelp Bass (3) vs. Queenfish (3)	-1.333	No	ns	>0.9999
Kelp Bass (3) vs. Round Stingray (5)	23.20	No	ns	>0.9999
Kelp Bass (3) vs. Salema (1)	-8.000	No	ns	>0.9999
Kelp Bass (3) vs. Shiner Surfperch (4)	23.25	No	ns	>0.9999
Kelp Bass (3) vs. Slough Anchovy (4)	14.50	No	ns	>0.9999
Kelp Bass (3) vs. Spotfin Croaker (3)	45.33	No	ns	>0.9999
Kelp Bass (3) vs. Spotted Sand Bass (13)	25.69	No	ns	>0.9999
Kelp Bass (3) vs. White Croaker (3)	37.00	No	ns	>0.9999
Kelp Bass (3) vs. White Surfperch (4)	42.75	No	ns	>0.9999
Kelp Bass (3) vs. Yellowfin Croaker (6)	-4.667	No	ns	>0.9999
Leopard Shark (2) vs. Northern Anchovy (4)	32.38	No	ns	>0.9999
Leopard Shark (2) vs. Queenfish (3)	10.17	No	ns	>0.9999
Leopard Shark (2) vs. Round Stingray (5)	34.70	No	ns	>0.9999
Leopard Shark (2) vs. Salema (1)	3.500	No	ns	>0.9999
Leopard Shark (2) vs. Shiner Surfperch (4)	34.75	No	ns	>0.9999
Leopard Shark (2) vs. Slough Anchovy (4)	26.00	No	ns	>0.9999
Leopard Shark (2) vs. Spotfin Croaker (3)	56.83	No	ns	0.7195

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Leopard Shark (2) vs. Spotted Sand Bass (13)	37.19	No	ns	>0.9999
Leopard Shark (2) vs. White Croaker (3)	48.50	No	ns	>0.9999
Leopard Shark (2) vs. White Surfperch (4)	54.25	No	ns	0.6795
Leopard Shark (2) vs. Yellowfin Croaker (6)	6.833	No	ns	>0.9999
Northern Anchovy (4) vs. Queenfish (3)	-22.21	No	ns	>0.9999
Northern Anchovy (4) vs. Round Stingray (5)	2.325	No	ns	>0.9999
Northern Anchovy (4) vs. Salema (1)	-28.88	No	ns	>0.9999
Northern Anchovy (4) vs. Shiner Surfperch (4)	2.375	No	ns	>0.9999
Northern Anchovy (4) vs. Slough Anchovy (4)	-6.375	No	ns	>0.9999
Northern Anchovy (4) vs. Spotfin Croaker (3)	24.46	No	ns	>0.9999
Northern Anchovy (4) vs. Spotted Sand Bass (13)	4.817	No	ns	>0.9999
Northern Anchovy (4) vs. White Croaker (3)	16.13	No	ns	>0.9999
Northern Anchovy (4) vs. White Surfperch (4)	21.88	No	ns	>0.9999
Northern Anchovy (4) vs. Yellowfin Croaker (6)	-25.54	No	ns	>0.9999
Queenfish (3) vs. Round Stingray (5)	24.53	No	ns	>0.9999
Queenfish (3) vs. Salema (1)	-6.667	No	ns	>0.9999
Queenfish (3) vs. Shiner Surfperch (4)	24.58	No	ns	>0.9999
Queenfish (3) vs. Slough Anchovy (4)	15.83	No	ns	>0.9999
Queenfish (3) vs. Spotfin Croaker (3)	46.67	No	ns	>0.9999
Queenfish (3) vs. Spotted Sand Bass (13)	27.03	No	ns	>0.9999
Queenfish (3) vs. White Croaker (3)	38.33	No	ns	>0.9999
Queenfish (3) vs. White Surfperch (4)	44.08	No	ns	>0.9999
Queenfish (3) vs. Yellowfin Croaker (6)	-3.333	No	ns	>0.9999
Round Stingray (5) vs. Salema (1)	-31.20	No	ns	>0.9999
Round Stingray (5) vs. Shiner Surfperch (4)	0.05000	No	ns	>0.9999
Round Stingray (5) vs. Slough Anchovy (4)	-8.700	No	ns	>0.9999
Round Stingray (5) vs. Spotfin Croaker (3)	22.13	No	ns	>0.9999
Round Stingray (5) vs. Spotted Sand Bass (13)	2.492	No	ns	>0.9999
Round Stingray (5) vs. White Croaker (3)	13.80	No	ns	>0.9999
Round Stingray (5) vs. White Surfperch (4)	19.55	No	ns	>0.9999
Round Stingray (5) vs. Yellowfin Croaker (6)	-27.87	No	ns	>0.9999
Salema (1) vs. Shiner Surfperch (4)	31.25	No	ns	>0.9999
Salema (1) vs. Slough Anchovy (4)	22.50	No	ns	>0.9999
Salema (1) vs. Spotfin Croaker (3)	53.33	No	ns	>0.9999
Salema (1) vs. Spotted Sand Bass (13)	33.69	No	ns	>0.9999
Salema (1) vs. White Croaker (3)	45.00	No	ns	>0.9999
Salema (1) vs. White Surfperch (4)	50.75	No	ns	>0.9999

Statistical Comparisons for Biota to Sediment Accumulation Factors (BSAFs) by Species
2018 Results

Salema (1) vs. Yellowfin Croaker (6)	3.333	No	ns	>0.9999
Shiner Surfperch (4) vs. Slough Anchovy (4)	-8.750	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotfin Croaker (3)	22.08	No	ns	>0.9999
Shiner Surfperch (4) vs. Spotted Sand Bass (13)	2.442	No	ns	>0.9999
Shiner Surfperch (4) vs. White Croaker (3)	13.75	No	ns	>0.9999
Shiner Surfperch (4) vs. White Surfperch (4)	19.50	No	ns	>0.9999
Shiner Surfperch (4) vs. Yellowfin Croaker (6)	-27.92	No	ns	>0.9999
Slough Anchovy (4) vs. Spotfin Croaker (3)	30.83	No	ns	>0.9999
Slough Anchovy (4) vs. Spotted Sand Bass (13)	11.19	No	ns	>0.9999
Slough Anchovy (4) vs. White Croaker (3)	22.50	No	ns	>0.9999
Slough Anchovy (4) vs. White Surfperch (4)	28.25	No	ns	>0.9999
Slough Anchovy (4) vs. Yellowfin Croaker (6)	-19.17	No	ns	>0.9999
Spotfin Croaker (3) vs. Spotted Sand Bass (13)	-19.64	No	ns	>0.9999
Spotfin Croaker (3) vs. White Croaker (3)	-8.333	No	ns	>0.9999
Spotfin Croaker (3) vs. White Surfperch (4)	-2.583	No	ns	>0.9999
Spotfin Croaker (3) vs. Yellowfin Croaker (6)	-50.00	No	ns	0.1914
Spotted Sand Bass (13) vs. White Croaker (3)	11.31	No	ns	>0.9999
Spotted Sand Bass (13) vs. White Surfperch (4)	17.06	No	ns	>0.9999
Spotted Sand Bass (13) vs. Yellowfin Croaker (6)	-30.36	No	ns	0.8031
White Croaker (3) vs. White Surfperch (4)	5.750	No	ns	>0.9999
White Croaker (3) vs. Yellowfin Croaker (6)	-41.67	No	ns	>0.9999
White Surfperch (4) vs. Yellowfin Croaker (6)	-47.42	No	ns	0.1206

Multivariate Statistical Comparisons for Fish Tissue Chemistry by Harbor, Guild, and Species-

2018 Results

Analysis of Similarities – Region

One-Way

Factors

Place	Name	Type	Levels
A	Region	Unordered	5

Region levels
Dana Point Harbor
Mission Bay
Oceanside Harbor
SD North Bay
SD South Bay

Tests for differences between unordered Region groups
Global Test
Sample statistic (R): 0.196
Significance level of sample statistic: 0.1%
Number of permutations: 999 (Random sample from a large number)
Number of permuted statistics greater than or equal to R: 0

Pairwise Tests

Groups	R Statistic	Significance Level %	Possible Permutations	Actual Permutations	Number >= Observed
Dana Point Harbor, Mission Bay	0.065	22.9	12376	999	228
Dana Point Harbor, Oceanside Harbor	0.159	7.6	8008	999	75
Dana Point Harbor, SD North Bay	0.19	6.2	100947	999	61
Dana Point Harbor, SD South Bay	0.366	0.8	18564	999	7
Mission Bay, Oceanside Harbor	0.205	0.7	352716	999	6
Mission Bay, SD North Bay	0.177	2	21474180	999	19
Mission Bay, SD South Bay	0.35	0.1	1352078	999	0
Oceanside Harbor, SD North Bay	0.262	0.6	8436285	999	5
Oceanside Harbor, SD South Bay	0.488	0.1	646646	999	0
SD North Bay, SD South Bay	0.022	31.3	51895935	999	312

Analysis of Similarities - Species

One-Way

Factors

Place	Name	Type	Levels
A	Species	Unordered	10

Species levels
Barred Sand Bass
Black Perch
Chub Mackerel
Shiner Surfperch
Spotted Sand Bass
White Surfperch
Round Stingray
Yellowfin Croaker
Northern Anchovy
Slough Anchovy

Tests for differences between unordered Species groups
Global Test
Sample statistic (R): 0.376
Significance level of sample statistic: 0.1%
Number of permutations: 999 (Random sample from a large number)
Number of permuted statistics greater than or equal to R: 0

Pairwise Tests

Groups	R Statistic	Significance Level %	Possible Permutations	Actual Permutations	Number >= Observed
Barred Sand Bass, Black Perch	0.698	0.8	120	120	1
Barred Sand Bass, Chub Mackerel	0.528	0.6	792	792	5
Barred Sand Bass, Shiner Surfperch	0.608	0.3	330	330	1
Barred Sand Bass, Spotted Sand Bass	-0.135	94.2	77520	999	941
Barred Sand Bass, White Surfperch	0.598	0.3	330	330	1
Barred Sand Bass, Round Stingray	0.825	0.1	792	792	1
Barred Sand Bass, Yellowfin Croaker	0.189	6.3	1716	999	62
Barred Sand Bass, Northern Anchovy	0.606	0.1	792	792	1
Barred Sand Bass, Slough Anchovy	0.365	3.3	330	330	11
Black Perch, Chub Mackerel	0.631	5.4	56	56	3
Black Perch, Shiner Surfperch	-0.148	74.3	35	35	26
Black Perch, Spotted Sand Bass	0.18	16.4	560	560	92

Black Perch, White Surfperch	0.204	17.1	35	35	6
Black Perch, Round Stingray	0.99	1.8	56	56	1
Black Perch, Yellowfin Croaker	0.63	3.6	84	84	3
Black Perch, Northern Anchovy	0.733	1.8	56	56	1
Black Perch, Slough Anchovy	1	2.9	35	35	1
Chub Mackerel, Shiner Surfperch	0.663	1.6	126	126	2
Chub Mackerel, Spotted Sand Bass	0.354	1	8568	999	9
Chub Mackerel, White Surfperch	0.744	1.6	126	126	2
Chub Mackerel, Round Stingray	0.848	0.8	126	126	1
Chub Mackerel, Yellowfin Croaker	0.163	12.3	462	462	57
Chub Mackerel, Northern Anchovy	0.572	0.8	126	126	1
Chub Mackerel, Slough Anchovy	0.363	4.8	126	126	6
Shiner Surfperch, Spotted Sand Bass	0.083	24.4	2380	999	243
Shiner Surfperch, White Surfperch	0.25	11.4	35	35	4
Shiner Surfperch, Round Stingray	0.963	0.8	126	126	1
Shiner Surfperch, Yellowfin Croaker	0.655	0.5	210	210	1
Shiner Surfperch, Northern Anchovy	0.444	0.8	126	126	1
Shiner Surfperch, Slough Anchovy	0.979	2.9	35	35	1
Spotted Sand Bass, White Surfperch	0.06	30	2380	999	299
Spotted Sand Bass, Round Stingray	0.4	0.2	8568	999	1
Spotted Sand Bass, Yellowfin Croaker	0.017	42.1	27132	999	420
Spotted Sand Bass, Northern Anchovy	0.397	1	8568	999	9
Spotted Sand Bass, Slough Anchovy	0.091	28.5	2380	999	284
White Surfperch, Round Stingray	0.956	0.8	126	126	1
White Surfperch, Yellowfin Croaker	0.798	0.5	210	210	1
White Surfperch, Northern Anchovy	0.8	0.8	126	126	1
White Surfperch, Slough Anchovy	1	2.9	35	35	1
Round Stingray, Yellowfin Croaker	0.899	0.2	462	462	1
Round Stingray, Northern Anchovy	0.844	0.8	126	126	1
Round Stingray, Slough Anchovy	0.894	0.8	126	126	1
Yellowfin Croaker, Northern Anchovy	0.643	0.2	462	462	1
Yellowfin Croaker, Slough Anchovy	0.472	1.4	210	210	3
Northern Anchovy, Slough Anchovy	0.213	14.3	126	126	18

Analysis of Similarities - Guild

One-Way

Factors

Place	Name	Type	Levels
A	Guild	Unordered	4

Guild levels
Predator - Mesocarnivore
Predator - Inverts
Forage - Mesocarnivore
Forage - Planktivore

Tests for differences between unordered Guild groups
Global Test
Sample statistic (R): 0.34
Significance level of sample statistic: 0.1%
Number of permutations: 999 (Random sample from a large number)
Number of permuted statistics greater than or equal to R: 0

Pairwise Tests

Groups	R Statistic	Significance Level %	Possible Permutations	Actual Permutations	Number >= Observed
Predator - Mesocarnivore, Predator - Inverts	0.241	1.1	Very large	999	10
Predator - Mesocarnivore, Forage - Mesocarnivore	0.32	2.4	376992	999	23
Predator - Mesocarnivore, Forage - Planktivore	0.26	1.3	273438880	999	12
Predator - Inverts, Forage - Mesocarnivore	0.888	0.1	4368	999	0
Predator - Inverts, Forage - Planktivore	0.796	0.1	167960	999	0
Forage - Mesocarnivore, Forage - Planktivore	0.454	0.6	2002	999	5

Permutational MANOVA – Region and Guild

Sums of squares type: Type III (partial)
Fixed effects sum to zero for mixed terms
Permutation method: Permutation of residuals under a reduced model
Number of permutations: 9999

Factors

Name	Abbrev.	Type	Levels
Region	Re	Fixed	5
Guild	Gu	Fixed	4

PERMANOVA table of results

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Re	4	53.115	13.279	3.6244	0.0001	9903
Gu	3	76.988	25.663	7.0045	0.0001	9907
RexGu**	6	28.509	4.7515	1.2969	0.1542	9906
Res	42	153.88	3.6637			
Total	55	385				

** Term has one or more empty cells

Details of the expected mean squares (EMS) for the model

Source	EMS
Re	1*V(Res) + 7.3526*S(Re)
Gu	1*V(Res) + 8.8238*S(Gu)
RexGu	1*V(Res) + 3.1609*S(RexGu)
Res	1*V(Res)

Construction of Pseudo-F ratio(s) from mean squares

Source	Numerator	Denominator	Num.df	Den.df
Re	1*Re	1*Res	4	42
Gu	1*Gu	1*Res	3	42
RexGu	1*RexGu	1*Res	6	42

Estimates of components of variation

Source	Estimate	Sq.root
S(Re)	1.3077	1.1435
S(Gu)	2.4931	1.579
S(RexGu)	0.34414	0.58664
V(Res)	3.6637	1.9141

Permutational MANOVA – Region and Species

Sums of squares type: Type III (partial)
Fixed effects sum to zero for mixed terms
Permutation method: Permutation of residuals under a reduced model
Number of permutations: 9999

Factors

Name	Abbrev.	Type	Levels
Region	Re	Fixed	5
Species	Sp	Random	10

PERMANOVA table of results

Source	df	SS	MS	Pseudo-F	P(perm)	Unique perms
Re	4	50.361	12.59	3.56	0.0001	9917
Sp	9	131.73	14.637	5.741	0.0001	9894
RexSp**	17	62.18	3.6576	1.4347	0.0604	9893
Res	25	63.737	2.5495			
Total	55	385				

** Term has one or more empty cells

Details of the expected mean squares (EMS) for the model

Source	EMS
Re	1*V(Res) + 1.452*V(RexSp) + 7.6769*S(Re)
Sp	1*V(Res) + 4.4145*V(Sp)
RexSp	1*V(Res) + 1.6299*V(RexSp)
Res	1*V(Res)

Construction of Pseudo-F ratio(s) from mean squares

Source	Numerator	Denominator	Num.df	Den.df
Re	1*Re	0.89083*RexSp + 0.10917*Res	4	19.93
Sp	1*Sp	1*Res	9	25
RexSp	1*RexSp	1*Res	17	25

Estimates of components of variation

Source	Estimate	Sq.root
S(Re)	1.1793	1.086
V(Sp)	2.7381	1.6547
V(RexSp)	0.67988	0.82455
V(Res)	2.5495	1.5967

APPENDIX D

CHAIN-OF-CUSTODY FORMS

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 2-5-19 Page 1 of 3

RHMP

Sample Collection By: _____ Project Name: Bight 18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
C1_9011ODANABOGI8WCR	2-5-19		Fish tissue		2	White Croaker	Metals / PCBs CHCs
C2_	:		:		:	:	✓ : ✓
C3_	:		:		:	:	✓ : ✓
C1_9020[illegible]NHBOGI8YFC	:		:		:	Yellowfin Croaker	✓ : ✓
C2_	:		:		:	:	✓ : ✓
C1_91203SDNBBOGI8KPB	:		:		:	Kelp Bass	✓ : ✓
C2_	:		:		:	:	✓ : ✓
C3_	:		:		:	:	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 2/20-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 2/20/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. ROHR	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company)		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 2-5-19 Page 2 of 3

RHMP

Sample Collection By:			Project Name: Bight 18				Project Number:	
Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis	
C1-9120SDNBBOGT18PCM	2-5-19		Fish tissue		2	Pacific Club Mackerel	✓ Metals/PCBs	CHCs ✓
C2-	"		"		"	"	✓	✓
C3-	"		"		"	"	✓	✓
C1-9120SDNBBOGT18SSB	"		"		"	Spotted Sand Bass	✓	✓
C2-	"		"		"	"	✓	✓
C3-	"		"		"	"	✓	✓
C1-9120SDSBBOGT18SSB	"		"		"	"	✓	✓
C2-	"		"		"	"	✓	✓
C3-	"		"		"	"	✓	✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 2-2019	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 11:20a.	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 2/20/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. GAKER	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company)		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 2/11/19 Page 3 of 3

RHMP

Sample Collection By: _____ Project Name: Bight 18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
C1_9060GMICABOG18CAC	2-11-19		Fish tissue		1	California Corbina	Metals / PCBs CHCs
C1_9060GMISSBOG18WHS	"		"		"	White Surfperch	✓ " "
C2_ "	"		"		2	"	✓ " ✓
C1_9060GMISSBOG18BLS	"		"		1	Black Surfperch	✓ " "
C1_9060GMISSBOG18BSH	"		"		1	Brown Smoothhound	✓ " "
C1_902080CNHBOG18SFC	"		"		1	Spotfin Croaker	" " ✓
C1_9011ODANABOG18PCM	"		"		2	Pacific Chub Mackerel	✓ " ✓
C1_91203SDNBBOG18SHS	"		"		1	Shiner	✓ " "

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 2-20-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 2/22/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. GOLDER	(Time) 11:20 a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company)		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 1 of 6

RHMP

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
C1_91202SDSBBOG18BKC	3/6/19		Fish tissue		2	Black Croaker	✓ Metals / PCBs, ✓ CHCs
C1_91202SDSBBOG18RSR	"		"		"	Round Stingray	✓ " ✓
C2_ "	"		"		"	"	✓ " ✓
C1_91202SDSBBOG18YFC	"		"		"	Yellowfin Croaker	✓ " ✓
C1_91202SDSBBOG18NAC	"		"		"	Northern Anchovy	✓ " ✓
C2_ "	"		"		"	"	✓ " ✓
C1_91202SDSBBOG18PCM	"		"		"	Pacific Chub Mackerel	✓ " ✓
C1_91202SDSBBOG18SAC	"		"		"	Slough Anchovy	✓ " ✓
C2_ "	"		"		"	"	✓ " ✓
C3_ "	"		"		"	"	✓ " ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BRANDEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK O. RAUER	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) AMTECS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 2 of 6

RHMP

Sample Collection By:			Project Name: Bight '18				Project Number:
Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
G_9120250SBBOG18LPS	3/6/19		Fish tissue		2	Leopard Shark	Metals / PCBs ✓, CHCs
G_91203SDNBBOG18LPS	"		"		"	"	✓ : ✓
G_91203SDNBBOG18BKC	"		"		"	Black Croaker	✓ : ✓
G_91203SDNBBOG18BLS	"		"		"	Black Surfperch	✓ : ✓
G_91203SDNBBOG18BSB	"		"		"	Barred Sand Bass	✓ : ✓
C2_ "	"		"		"	"	✓ : ✓
G_91203SDNBBOG18NAC	"		"		"	Northern Anchovy	✓ : ✓
C2_ "	"		"		"	"	✓ : ✓
G_91203SDNBBOG18RSR	"		"		"	Round Stingray	✓ : ✓
C2_ "	"		"		"	"	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. BAKER	(Time) 17:45	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PHYSIS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 3 of 6

RHMP

Sample Collection By:			Project Name: Bight '18				Project Number:
Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
Ci_91203SDNBBOGI8QEF	3/6/19		Fish tissue		2	Queenfish	Metals / PCBs, OCs
C2_ :	:		:		2		✓ : ✓
C3_ :	:		:		:		✓ : ✓
NA C1_91203SDNBBOGI8SAC	:		:		1	Slough Anchovy	☐ : ✓
C1_90606MISSBOGI8SSB	:		:		2	Spotted Sand Bass	✓ : ✓
C2_ :	:		:		:	:	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
C1_90606MISSBOGI8RSR	:		:		:	Round Stingray	✓ : ✓
C1_90606MISSBOGI8SEL	:		:		:	Salema	✓ : ✓
C1_90606MISSBOGI8SHS	:		:		:	Shiner Surfperch	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARLA D. ROSE	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) BHTSIS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 4 of 6

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
G_90606MISSBoGI8YFC	3/6/19		Fish tissue		2	Yellowfin Croaker	Metals / PCBs, CHCs
C2_ :	:		:		:	:	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
G_902080CNH BoGI8 BSB	:		:		:	Barred Sand Bass	✓ : ✓
C2_ :	:		:		:	:	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
G_902080CNHBoGI8SFC	:		:		:	Spotfin Croaker	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
G_902080CNHBoGI8SHS	:		:		:	Shiner Surfperch	✓ : ✓
G_902080CNHBoGI8CAH	:		:		:	California Halibut	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) NOEL A. FOLK	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PXPS13		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody
Date 3/6/19 Page 5 of 6

RHMP

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
G1_90208OCNHBOG18SSB	3/6/19		Fish tissue		2	Spotted Sand Bass	Metals / PCBs, ✓ CHCs
G2_ :	:		:		2	:	✓ : ✓
G3_ :	:		:		2	:	✓ : ✓
G1_90208OCNHBOG18WHS	:		:		:	White Surfperch	✓ : ✓
G_90110DANABOG18BLS	:		:		1	Black Surfperch	☐ : ✓
G1_90110DANABOG18BSB	:		:		2	Barred Sand Bass	✓ : ✓
G_90110DANABOG18SHS	:		:		:	Shiner Surfperch	✓ : ✓
G1_90110DANABOG18SSB	:		:		:	Spotted Sand Bass	✓ : ✓
G_90110DANABOG18WHS	:		:		:	White Surfperch	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 2:45p.	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. GRAY	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PARIS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3-6/19 Page 6 of 6

RHMP

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
Dup-C2_91203SDNBBoG18BSB						Report as	✓ Metals / PCBs / CHCs
	3-6-19		Fish tissue		2	C2_91203SDNBBoG18 BSB, rep 2	
Dup-C1_91203SDNBBoG18NAC						Report as	✓ Metals / PCBs. ✓ CHCs
	3-6-19		:		2	C1_91203SDNBBoG18NAC, rep 2	

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARIA O. RAMOS	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PHYSIS		(Company)		(Company)	

APPENDIX E

RAW CHEMISTRY REPORTS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

June 14, 2019

Chris Stransky
Wood Environment & Infrastructure Solutions, Inc.
9210 Sky Park Court
Suite 200
San Diego, CA 92123-

Project Name: RHMP Bight 18
Physis Project ID: 1807003-020

Dear Chris,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 2/20/2019. A total of 25 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

Elements
Trace Selenium by EPA 6020
Trace Mercury by EPA 245.7
Organics
Polynuclear Aromatic Hydrocarbons by EPA 8270D
Percent Solids by SM 2540 B
Percent Lipids by Gravimetric
PBDE Congeners by EPA 8270D-NCI
Organochlorine Pesticides & PCB Congeners by EPA 8270D

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,

Rich Gossett
714 602-5320
Extension 201
richgossett@physislabs.com

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PROJECT SAMPLE LIST

Wood Environment & Infrastructure Solutions, Inc. PHYSIS Project ID: 1807003-020

RHMP Bight 18 Total Samples: 25

PHYSIS ID	Sample ID	Description	Date	Time	Matrix
61941	C1_90110DANABOG18WCR	White Croaker	2/5/2019		Tissue
61942	C2_90110DANABOG18WCR	White Croaker	2/5/2019		Tissue
61943	C3_90110DANABOG18WCR	White Croaker	2/5/2019		Tissue
61944	C1_902080CNHBOG18YFC	Yellowfin Croaker	2/5/2019		Tissue
61945	C2_902080CNHBOG18YFC	Yellowfin Croaker	2/5/2019		Tissue
61946	C1_912035DNBBOG18KPB	Kelp Bass	2/5/2019		Tissue
61947	C2_912035DNBBOG18KPB	Kelp Bass	2/5/2019		Tissue
61948	C3_912035DNBBOG18KPB	Kelp Bass	2/5/2019		Tissue
61949	C1_91203SDNBOG18PCM	Pacific Chub Mackerel	2/5/2019		Tissue
61950	C2_91203SDNBOG18PCM	Pacific Chub Mackerel	2/5/2019		Tissue
61951	C3_91203SDNBOG18PCM	Pacific Chub Mackerel	2/5/2019		Tissue
61952	C1_91203SDNBBOG18SSB	Spotted Sand Bass	2/5/2019		Tissue
61953	C2_91203SDNBBOG18SSB	Spotted Sand Bass	2/5/2019		Tissue
61954	C3_91203SDNBBOG18SSB	Spotted Sand Bass	2/5/2019		Tissue
61955	C1_91202SDSBBOG18SSB	Spotted Sand Bass	2/5/2019		Tissue
61956	C2_91202SDSBBOG18SSB	Spotted Sand Bass	2/5/2019		Tissue
61957	C3_91202SDSBBOG18SSB	Spotted Sand Bass	2/5/2019		Tissue
61958	C1_90606MICABOG18CAC	California Corbina	2/11/2019		Tissue
61959	C1_90606MISSBOG18WHS	White Surf Perch	2/11/2019		Tissue
61960	C2_90606MISSBOG18WHS	White Surf Perch	2/11/2019		Tissue
61961	C1_90606MISSBOG18BLS	Black Surf Perch	2/11/2019		Tissue
61962	C1_90606MISSBOG18BSH	Brown Smoothhound	2/11/2019		Tissue
61963	C1_902080CNHBOG18SFC	Spotfin Croaker	2/11/2019		Tissue
61964	C1_90110DANABOG18PCM	Pacific Chub Mackerel	2/11/2019		Tissue
61965	C1_91203SDNBBOG18SHS	Shiner	2/11/2019		Tissue

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

ABBREVIATIONS and ACRONYMS

QM	Quality Manual
QA	Quality Assurance
QC	Quality Control
MDL	method detection limit
RL	reporting limit
R1	project sample
R2	project sample replicate
MS1	matrix spike
MS2	matrix spike replicate
B1	procedural blank
B2	procedural blank replicate
BS1	blank spike
BS2	blank spike replicate
LCS1	laboratory control spike
LCS2	laboratory control spike replicate
LCM1	laboratory control material
LCM2	laboratory control material replicate
CRM1	certified reference material
CRM2	certified reference material replicate
RPD	relative percent difference
LMW	low molecular weight
HMW	high molecular weight

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS1/MS2, BS1/BS2, LCS1/LCS2, LCM1/LCM2, CRM1/CRM2, surrogate spikes and/or replicate project sample analysis (R1/R2) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS QUALIFIER CODES

CODE	DEFINITION
#	see Case Narrative
ND	analyte not detected at or above the MDL
B	analyte was detected in the procedural blank greater than 10 times the MDL
E	analyte concentration exceeds the upper limit of the linear calibration range, reported value is estimated
H	sample received and/or analyzed past the recommended holding time
J	analyte was detected at a concentration below the RL and above the MDL, reported value is estimated
N	insufficient sample, analysis could not be performed
M	analyte was outside the specified accuracy and/or precision acceptance limits due to matrix interference. The associated B/BS were within limits, therefore the sample data was reported without further clarification
SH	analyte concentration in the project sample exceeded the spike concentration, therefore accuracy and/or precision acceptance limits do not apply
SL	analyte results were lower than 10 times the MDL, therefore accuracy and/or precision acceptance limits do not apply
NH	project sample was heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices, therefore accuracy and/or precision acceptance limits do not apply
Q	analyte was outside the specified QAPP acceptance limits for precision and/or accuracy but within Physis derived acceptance limits, therefore the sample data was reported without further clarification
R	Physis' QM allows for 5% of the target compounds greater than 10 times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and does not indicate any significant problems with the analysis of these project samples

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

CASE NARRATIVE

QUALIFIER NOTES

In addition to the use of analyte specific Physis Qualifier Codes where applicable, the following were also noted.

CERTIFIED REFERENCE MATERIAL, MATRIX SPIKES and BLANK SPIKES

1 The QA Manual Tables 6-2 and 6-3, specifies that spike recoveries and CRM results should be within ±50% of the true value for ≥70% of the analytes.

ANALYTICAL REPORT

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	98			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	76			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	106			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.13	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	97			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	87			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	108			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.98	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	96			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	108			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.21	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	108			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	97			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	84			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	118			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	19.4	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	1.48	1	5	NA	J	O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.3	0.187	0.5	NA	J	O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.289	0.186	0.5	NA	J	O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfin Cr**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	96			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	95			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	80			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	5.66	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	105			NA		O-21062	24-Apr-19	04-May-19
(PCB112)	EPA 8270D	% Recovery	103			NA		O-21062	24-Apr-19	04-May-19
(PCB198)	EPA 8270D	% Recovery	66			NA		O-21062	24-Apr-19	04-May-19
(TCMX)	EPA 8270D	% Recovery	121			NA		O-21062	24-Apr-19	04-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	04-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	04-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	04-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	04-May-19
4,4'-DDE	EPA 8270D	ng/wet g	8.09	0.193	0.5	NA		O-21062	24-Apr-19	04-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	04-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	04-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	04-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	04-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	04-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	04-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	04-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	04-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	108			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	114			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	73			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	119			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	10.5	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.201	0.186	0.5	NA	J	O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	102			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	101			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	67			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	120			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	7.22	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.213	0.186	0.5	NA	J	O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Chub M**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	69			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	87			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.5	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	90			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	74			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	6.8	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.397	0.192	0.5	NA	J	O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.38	0.186	0.5	NA	J	O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	90			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	79			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	95			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	6.14	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.221	0.192	0.5	NA	J	O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.345	0.186	0.5	NA	J	O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	98			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	97			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	97			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.38	0.193	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(PCB112)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(PCB198)	EPA 8270D	% Recovery	77			NA		O-21062	24-Apr-19	05-May-19
(TCMX)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	05-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	05-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.362	0.193	0.5	NA	J	O-21062	24-Apr-19	05-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	05-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	05-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	05-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	05-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	05-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	05-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	05-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21062	24-Apr-19	06-May-19
(PCB112)	EPA 8270D	% Recovery	100			NA		O-21062	24-Apr-19	06-May-19
(PCB198)	EPA 8270D	% Recovery	82			NA		O-21062	24-Apr-19	06-May-19
(TCMX)	EPA 8270D	% Recovery	101			NA		O-21062	24-Apr-19	06-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.538	0.193	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	06-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	06-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	06-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	06-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61955-R1	**C1_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	103			NA		O-21062	24-Apr-19	06-May-19
(PCB112)	EPA 8270D	% Recovery	100			NA		O-21062	24-Apr-19	06-May-19
(PCB198)	EPA 8270D	% Recovery	91			NA		O-21062	24-Apr-19	06-May-19
(TCMX)	EPA 8270D	% Recovery	102			NA		O-21062	24-Apr-19	06-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.04	0.193	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	06-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	06-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	06-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	06-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21062	24-Apr-19	06-May-19
(PCB112)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	06-May-19
(PCB198)	EPA 8270D	% Recovery	80			NA		O-21062	24-Apr-19	06-May-19
(TCMX)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	06-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.818	0.193	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	06-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	06-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	06-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	06-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21062	24-Apr-19	06-May-19
(PCB112)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	06-May-19
(PCB198)	EPA 8270D	% Recovery	80			NA		O-21062	24-Apr-19	06-May-19
(TCMX)	EPA 8270D	% Recovery	93			NA		O-21062	24-Apr-19	06-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.881	0.193	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	06-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	06-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	06-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	06-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61958-R1	**C1_90606MICABOG18CAC California Co**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	115			NA		O-21062	24-Apr-19	06-May-19
(PCB112)	EPA 8270D	% Recovery	106			NA		O-21062	24-Apr-19	06-May-19
(PCB198)	EPA 8270D	% Recovery	72			NA		O-21062	24-Apr-19	06-May-19
(TCMX)	EPA 8270D	% Recovery	114			NA		O-21062	24-Apr-19	06-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.11	0.193	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	06-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	06-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.301	0.192	0.5	NA	J	O-21062	24-Apr-19	06-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	06-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.346	0.186	0.5	NA	J	O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	97			NA		O-21062	24-Apr-19	06-May-19
(PCB112)	EPA 8270D	% Recovery	90			NA		O-21062	24-Apr-19	06-May-19
(PCB198)	EPA 8270D	% Recovery	73			NA		O-21062	24-Apr-19	06-May-19
(TCMX)	EPA 8270D	% Recovery	102			NA		O-21062	24-Apr-19	06-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21062	24-Apr-19	06-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.39	0.193	0.5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21062	24-Apr-19	06-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21062	24-Apr-19	06-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21062	24-Apr-19	06-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21062	24-Apr-19	06-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21062	24-Apr-19	06-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21062	24-Apr-19	06-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21062	24-Apr-19	06-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	95			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	85			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	107			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.22	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	106			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	93			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	73			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	110			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.787	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown Smoo**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	103			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	90			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	82			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	106			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	12.9	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.281	0.187	0.5	NA	J	O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.378	0.186	0.5	NA	J	O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin Croak**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	97			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	84			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	74			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.02	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	95			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	68			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	119			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	11.2	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(PCB030)	EPA 8270D	% Recovery	86			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	83			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	50			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	2.62	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	10.2	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.439	0.187	0.5	NA	J	O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.708	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	1.04	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White Croak**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.4	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White Croak**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.2	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White Croak**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	19.9	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	22.4	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfin Cr**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	22.4	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	22.5	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	23.2	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	21.9	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Chub M**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	23.1	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	23.6	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	23.1	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.3	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.3	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.3	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61955-R1	**C1_91202SDSBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.5	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	18.9	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.3	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61958-R1	**C1_90606MICABOG18CAC California Co**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	22.3	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	21.3	0.1	0.1	NA		C-43015	24-Apr-19	24-Apr-19	9:00
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.1	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19	9:00

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Surf Per**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.4	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19	9:00
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown Smoo**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.5	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19	9:00
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin Croak**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	21.1	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19	9:00
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	22.5	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19	9:00
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Solids	SM 2540 B	%	20.7	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19	9:00

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS Project ID: 1807003-020
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: RHMP Bight 18

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White C**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.123133	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.15315	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.120415	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.14825	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.111384	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.161308	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.1788	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.34419	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.115378	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.200346	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bas**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.092332	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.30402	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bas**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.081025	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.331045	0.025	0.05	NA		E-14123	22-May-19	29-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bas**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.082631	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.321342	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Ch**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.074945	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.329758	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific C**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.098471	1E-05	0.00002	NA		E-15148	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.360468	0.025	0.05	NA		E-14123	22-May-19	29-May-19
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific C**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.080885	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.399803	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.261612	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.350844	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.192728	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.313082	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.164268	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.322452	0.025	0.05	NA		E-14124	22-May-19	29-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61955-R1	**C1_91202SDSBBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.16449	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.418404	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.277242	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.473386	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.20503	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.49126	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61958-R1	**C1_90606MICABOG18CAC Californi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.0496884	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.25868	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.082508	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.205312	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.054069	1E-05	0.00002	NA		E-15149	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.189543	0.025	0.05	NA		E-14124	22-May-19	29-May-19
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Su**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.023063	1E-05	0.00002	NA		E-15150	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.160627	0.025	0.05	NA		E-14125	22-May-19	29-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.565524	1E-05	0.00002	NA		E-15150	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.17478	0.025	0.05	NA		E-14125	22-May-19	29-May-19
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.022609	1E-05	0.00002	NA		E-15150	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.285255	0.025	0.05	NA		E-14125	22-May-19	29-May-19
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific C**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.075892	1E-05	0.00002	NA		E-15150	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.301768	0.025	0.05	NA		E-14125	22-May-19	29-May-19
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.038014	1E-05	0.00002	NA		E-15150	22-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.176436	0.025	0.05	NA		E-14125	22-May-19	29-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	0.431	0.028	0.5	NA	J	O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.246	0.027	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	0.356	0.057	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	0.522	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	ND	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	ND	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	0.393	0.081	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	ND	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	ND	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	0.514	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	0.409	0.012	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	0.586	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	0.282	0.25	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	0.899	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.833	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	0.548	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	0.92	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	1.51	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	0.556	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	1.68	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.267	0.056	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	0.761	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfin Cr**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	0.494	0.081	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	0.465	0.25	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	0.735	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.01	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	0.619	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	1.14	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	1.82	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	0.819	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	0.104	0.073	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	2.26	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.278	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.172	0.056	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	0.761	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB049	EPA 8270D	ng/wet g	0.601	0.036	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB052	EPA 8270D	ng/wet g	0.655	0.012	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB087	EPA 8270D	ng/wet g	0.691	0.081	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB095	EPA 8270D	ng/wet g	0.532	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB099	EPA 8270D	ng/wet g	1.93	0.028	0.5	NA		O-21062	24-Apr-19	04-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.74	0.027	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB110	EPA 8270D	ng/wet g	0.902	0.074	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB118	EPA 8270D	ng/wet g	1.79	0.069	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB138	EPA 8270D	ng/wet g	3.85	0.057	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB149	EPA 8270D	ng/wet g	1.19	0.092	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB151	EPA 8270D	ng/wet g	0.413	0.073	0.5	NA	J	O-21062	24-Apr-19	04-May-19
PCB153	EPA 8270D	ng/wet g	4.86	0.065	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB158	EPA 8270D	ng/wet g	0.466	0.074	0.5	NA	J	O-21062	24-Apr-19	04-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB180	EPA 8270D	ng/wet g	0.893	0.154	0.5	NA		O-21062	24-Apr-19	04-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.333	0.056	0.5	NA	J	O-21062	24-Apr-19	04-May-19
PCB187	EPA 8270D	ng/wet g	1.39	0.168	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	04-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	04-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	0.606	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	0.534	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	0.639	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	1.45	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.34	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	0.718	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	1.4	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	3.16	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	0.955	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	0.318	0.073	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	4.13	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	1.25	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	0.483	0.036	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	0.373	0.012	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	0.631	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	0.575	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	0.339	0.25	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	1.32	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.16	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	0.599	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	1.94	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	3.35	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	1.09	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	0.294	0.073	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	4.09	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.351	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	1.03	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.4	0.056	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	1.78	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Chub M**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	0.569	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	0.593	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	0.854	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	1.04	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	0.607	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	1.02	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	1.94	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	2.05	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	0.559	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	1.33	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	2.09	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	0.654	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	3.86	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	1.62	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	0.632	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	5.59	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.22	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	0.218	0.049	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	0.509	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	0.458	0.085	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	1.24	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.4	0.056	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	1.93	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	0.444	0.028	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	1.17	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	1.58	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	1.77	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	0.668	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	0.478	0.021	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	2.03	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	2.68	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	2.44	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	6.35	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	7.93	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	1.47	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	4.28	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	6.21	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	2.14	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	14.4	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	0.886	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	6.93	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	2.39	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	20.4	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	0.633	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.978	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	0.534	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	2.59	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	1.43	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	1.73	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	4.33	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	1.93	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	7.06	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	1.03	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	0.707	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	0.329	0.028	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	0.947	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	1.19	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	1.35	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	0.494	0.023	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	0.477	0.021	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	1.48	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	1.71	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	1.51	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	3.85	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	5.49	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	1.12	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	2.46	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	4.24	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	1.38	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	8.72	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	0.516	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	4.18	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	1.51	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	11.8	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	0.366	0.089	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.465	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	0.359	0.049	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	1.58	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	0.776	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	1.14	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	2.56	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.779	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	3.72	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	0.588	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	0.489	0.081	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	2.13	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.81	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	0.48	0.047	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	0.479	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	2.38	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	0.591	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	4.01	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	1.11	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	6.82	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.411	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	1.64	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	1.17	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.681	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	1.96	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB049	EPA 8270D	ng/wet g	0.347	0.036	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB087	EPA 8270D	ng/wet g	0.597	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB099	EPA 8270D	ng/wet g	2.04	0.028	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.45	0.027	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB105	EPA 8270D	ng/wet g	0.598	0.047	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB118	EPA 8270D	ng/wet g	2.58	0.069	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB128	EPA 8270D	ng/wet g	0.912	0.081	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB138	EPA 8270D	ng/wet g	4.79	0.057	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB149	EPA 8270D	ng/wet g	0.519	0.092	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB153	EPA 8270D	ng/wet g	7.68	0.065	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB158	EPA 8270D	ng/wet g	0.429	0.074	0.5	NA	J	O-21062	24-Apr-19	05-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB170	EPA 8270D	ng/wet g	1.21	0.118	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB180	EPA 8270D	ng/wet g	1.48	0.154	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.862	0.056	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB187	EPA 8270D	ng/wet g	2.34	0.168	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	05-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	05-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB099	EPA 8270D	ng/wet g	1.08	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.773	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB105	EPA 8270D	ng/wet g	0.362	0.047	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB118	EPA 8270D	ng/wet g	1.51	0.069	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB138	EPA 8270D	ng/wet g	2.34	0.057	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB149	EPA 8270D	ng/wet g	0.402	0.092	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB153	EPA 8270D	ng/wet g	3.22	0.065	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB158	EPA 8270D	ng/wet g	0.247	0.074	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.371	0.056	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61955-R1	C1_91202SDSBBOG18SSB Spotted Sand		Matrix: Tissue			Sampled: 05-Feb-19			Received: 20-Feb-19	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB049	EPA 8270D	ng/wet g	0.47	0.036	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB087	EPA 8270D	ng/wet g	0.722	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB099	EPA 8270D	ng/wet g	2.48	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.25	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB105	EPA 8270D	ng/wet g	0.582	0.047	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB118	EPA 8270D	ng/wet g	2.66	0.069	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB128	EPA 8270D	ng/wet g	0.76	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB138	EPA 8270D	ng/wet g	4.36	0.057	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB149	EPA 8270D	ng/wet g	0.576	0.092	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB151	EPA 8270D	ng/wet g	0.143	0.073	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB153	EPA 8270D	ng/wet g	8.65	0.065	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB156	EPA 8270D	ng/wet g	0.368	0.089	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB158	EPA 8270D	ng/wet g	0.274	0.074	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB167	EPA 8270D	ng/wet g	0.153	0.049	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB170	EPA 8270D	ng/wet g	1.32	0.118	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB180	EPA 8270D	ng/wet g	1.35	0.154	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.627	0.056	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB187	EPA 8270D	ng/wet g	2.76	0.168	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB099	EPA 8270D	ng/wet g	1.89	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.08	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB118	EPA 8270D	ng/wet g	1.73	0.069	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB128	EPA 8270D	ng/wet g	0.494	0.081	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB138	EPA 8270D	ng/wet g	3.19	0.057	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB149	EPA 8270D	ng/wet g	0.454	0.092	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB153	EPA 8270D	ng/wet g	8.07	0.065	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB158	EPA 8270D	ng/wet g	0.204	0.074	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB167	EPA 8270D	ng/wet g	0.108	0.049	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB180	EPA 8270D	ng/wet g	1.62	0.154	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.718	0.056	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB187	EPA 8270D	ng/wet g	2.03	0.168	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB099	EPA 8270D	ng/wet g	1.74	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.18	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB118	EPA 8270D	ng/wet g	1.96	0.069	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB128	EPA 8270D	ng/wet g	0.489	0.081	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB138	EPA 8270D	ng/wet g	2.89	0.057	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB149	EPA 8270D	ng/wet g	0.519	0.092	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB153	EPA 8270D	ng/wet g	6.38	0.065	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB158	EPA 8270D	ng/wet g	0.249	0.074	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB167	EPA 8270D	ng/wet g	0.183	0.049	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB180	EPA 8270D	ng/wet g	1.22	0.154	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.673	0.056	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB187	EPA 8270D	ng/wet g	1.92	0.168	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61958-R1	**C1_90606MICABOG18CAC California Co**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB049	EPA 8270D	ng/wet g	0.963	0.036	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB052	EPA 8270D	ng/wet g	0.834	0.012	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB087	EPA 8270D	ng/wet g	0.675	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB095	EPA 8270D	ng/wet g	0.935	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB097	EPA 8270D	ng/wet g	1.04	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB099	EPA 8270D	ng/wet g	2.13	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	2.38	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB110	EPA 8270D	ng/wet g	1.34	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB118	EPA 8270D	ng/wet g	2.25	0.069	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB128	EPA 8270D	ng/wet g	0.827	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB138	EPA 8270D	ng/wet g	3.96	0.057	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB149	EPA 8270D	ng/wet g	1.98	0.092	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB151	EPA 8270D	ng/wet g	0.313	0.073	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB153	EPA 8270D	ng/wet g	5.08	0.065	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB158	EPA 8270D	ng/wet g	0.364	0.074	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB167	EPA 8270D	ng/wet g	0.183	0.049	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB187	EPA 8270D	ng/wet g	1.62	0.168	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB099	EPA 8270D	ng/wet g	0.666	0.028	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.468	0.027	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB118	EPA 8270D	ng/wet g	0.499	0.069	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB138	EPA 8270D	ng/wet g	0.801	0.057	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB153	EPA 8270D	ng/wet g	1.68	0.065	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB187	EPA 8270D	ng/wet g	0.318	0.168	0.5	NA	J	O-21062	24-Apr-19	06-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21062	24-Apr-19	06-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21062	24-Apr-19	06-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	0.694	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	0.666	0.057	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	0.979	0.065	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	0.768	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.461	0.027	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	0.478	0.057	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	0.484	0.065	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown Smoo**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	1.76	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.42	0.027	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	0.397	0.074	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	2.01	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	2.97	0.057	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	0.225	0.092	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	4.5	0.065	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	0.47	0.074	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	1.43	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.574	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	1.49	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin Croak**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	0.471	0.028	0.5	NA	J	O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.365	0.027	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	0.204	0.057	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	0.217	0.065	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	0.193	0.074	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	0.417	0.028	0.5	NA	J	O-21064	25-Apr-19	13-May-19

PHYSIS Project ID: 1807003-020
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: RHMP Bight 18

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.428	0.027	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	0.736	0.057	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	0.255	0.092	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	1.03	0.065	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	0.986	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	2.6	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	2.42	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	2.87	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	1.85	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	1.57	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	2.09	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	2.55	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	1.62	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	7.24	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19

PHYSIS Project ID: 1807003-020
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: RHMP Bight 18

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	7.71	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	2.22	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	3.12	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	8.66	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	2.32	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	0.537	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	15.9	0.057	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	0.928	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	3.52	0.092	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	2.19	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	17.9	0.065	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	1.05	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	0.229	0.103	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	1.32	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	0.737	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	1.37	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	2.91	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	1.71	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	3.69	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.03	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	5.78	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	0.835	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	67			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	110			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	91			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	104			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	63			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	108			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.136	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	60			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	124			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.416	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfin Cr**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	61			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	115			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.51	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.974	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.229	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.196	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PHYSIS Project ID: 1807003-020
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: RHMP Bight 18

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	50			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	135			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.44	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.157	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.308	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.253	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	55			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	125			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	2.51	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.188	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.43	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.403	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	0.123	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	54			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	120			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.772	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.11	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.197	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.346	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Chub M**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	83			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	95			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.12	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.175	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	0.652	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.612	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.476	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	0.208	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	54			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.04	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.169	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.231	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.191	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	54			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	108			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.03	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.146	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.32	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.171	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	60			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.102	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.0976	0.05	0.1	NA	J	O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	54			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	104			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	74			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	102			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61955-R1	**C1_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	61			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	110			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.139	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	83			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	91			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	60			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	104			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61958-R1	**C1_90606MICABOG18CAC California Co**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	47			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	131			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	54			NA		O-21062	24-Apr-19	02-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	105			NA		O-21062	24-Apr-19	02-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21062	24-Apr-19	02-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	02-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	72			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	117			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	61			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	116			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown Smoo**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	76			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	115			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.15	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	3.01	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.193	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.688	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin Croak**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	70			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	102			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	64			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	119			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.837	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.353	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.22	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	53			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	105			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	2.97	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.297	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.185	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.481	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	0.0788	0.05	0.1	NA	J	O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	181			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	87			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	73			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	90			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	148			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	77			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	85			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	85			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	133			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	83			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	71			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	179			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	75			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfin Cr**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	94			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	93			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	179			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	77			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	100			NA		O-21062	24-Apr-19	04-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	90			NA		O-21062	24-Apr-19	04-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	210			NA		O-21062	24-Apr-19	04-May-19
(d12-Perylene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	04-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	87			NA		O-21062	24-Apr-19	04-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	04-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	101			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	226			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	83			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bass**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	99			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	90			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	207			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	79			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Chub M**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	82			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	84			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	233			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	82			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	67			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	85			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	87			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	200			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	82			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	73			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	206			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	83			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	73			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	96			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	101			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	233			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	93			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	74			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	84			NA		O-21062	24-Apr-19	05-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	05-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	190			NA		O-21062	24-Apr-19	05-May-19
(d12-Perylene)	EPA 8270D	% Recovery	82			NA		O-21062	24-Apr-19	05-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	66			NA		O-21062	24-Apr-19	05-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	05-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	85			NA		O-21062	24-Apr-19	06-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	06-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	200			NA		O-21062	24-Apr-19	06-May-19
(d12-Perylene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	06-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	60			NA		O-21062	24-Apr-19	06-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61955-R1	**C1_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	06-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	91			NA		O-21062	24-Apr-19	06-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	202			NA		O-21062	24-Apr-19	06-May-19
(d12-Perylene)	EPA 8270D	% Recovery	83			NA		O-21062	24-Apr-19	06-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	62			NA		O-21062	24-Apr-19	06-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	06-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	89			NA		O-21062	24-Apr-19	06-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	205			NA		O-21062	24-Apr-19	06-May-19
(d12-Perylene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	06-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	67			NA		O-21062	24-Apr-19	06-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	92			NA		O-21062	24-Apr-19	06-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	93			NA		O-21062	24-Apr-19	06-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	223			NA		O-21062	24-Apr-19	06-May-19
(d12-Perylene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	06-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	76			NA		O-21062	24-Apr-19	06-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61958-R1	**C1_90606MICABOG18CAC California Co**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	96			NA		O-21062	24-Apr-19	06-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	94			NA		O-21062	24-Apr-19	06-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	266			NA		O-21062	24-Apr-19	06-May-19
(d12-Perylene)	EPA 8270D	% Recovery	88			NA		O-21062	24-Apr-19	06-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	82			NA		O-21062	24-Apr-19	06-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	85			NA		O-21062	24-Apr-19	06-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	86			NA		O-21062	24-Apr-19	06-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	199			NA		O-21062	24-Apr-19	06-May-19
(d12-Perylene)	EPA 8270D	% Recovery	81			NA		O-21062	24-Apr-19	06-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	67			NA		O-21062	24-Apr-19	06-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21062	24-Apr-19	06-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	104			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	102			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	181			NA		O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	98			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	80			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	111			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	105			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	231			NA		O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	103			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown Smoo**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	109			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	202			NA		O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	106			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	82			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin Croak**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	102			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	151			NA		O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	85			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	118			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	244			NA		O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	101			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	95			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	78			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	198			NA		O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	74			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	83			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61941-R1	**C1_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.281	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61942-R1	**C2_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.278	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61943-R1	**C3_90110DANABOG18WCR White Croak**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.221	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61944-R1	**C1_902080CNHBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.582	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61945-R1	**C2_902080CNHBOG18YFC Yellowfin Cr**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.418	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61946-R1	**C1_912035DNBBOG18KPB Kelp Bass**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	1.23	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61947-R1	**C2_912035DNBBOG18KPB Kelp Bass**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	1.52	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61948-R1	**C3_912035DNBBOG18KPB Kelp Bass**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.999	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61949-R1	**C1_91203SDNBOG18PCM Pacific Chub M**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.235	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61950-R1	**C2_91203SDNBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.329	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 61951-R1	**C3_91203SDNBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.31	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61952-R1	**C1_91203SDNBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.2	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61953-R1	**C2_91203SDNBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.275	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61954-R1	**C3_91203SDNBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.16	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61955-R1	**C1_91202SDSBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.259	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61956-R1	**C2_91202SDSBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.199	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61957-R1	**C3_91202SDSBBOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 05-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.264	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61958-R1	**C1_90606MICABOG18CAC California Co**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.982	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61959-R1	**C1_90606MISSBOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.415	0.01	0.05	NA		C-27098	26-Apr-19	26-Apr-19
Sample ID: 61960-R1	**C2_90606MISSBOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**	
Percent Lipids	Gravimetric	% wet weight	0.351	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19 13:00

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
Sample ID: 61961-R1	**C1_90606MISSBOG18BLS Black Surf Per**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Lipids	Gravimetric	% wet weight	0.596	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19	13:00
Sample ID: 61962-R1	**C1_90606MISSBOG18BSH Brown Smoo**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Lipids	Gravimetric	% wet weight	0.257	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19	13:00
Sample ID: 61963-R1	**C1_902080CNHBOG18SFC Spotfin Croak**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Lipids	Gravimetric	% wet weight	0.322	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19	13:00
Sample ID: 61964-R1	**C1_90110DANABOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Lipids	Gravimetric	% wet weight	1.08	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19	13:00
Sample ID: 61965-R1	**C1_91203SDNBBOG18SHS Shiner**		**Matrix: Tissue**			**Sampled: 11-Feb-19**			**Received: 20-Feb-19**		
Percent Lipids	Gravimetric	% wet weight	0.0498	0.01	0.05	NA	J	C-27099	30-Apr-19	30-Apr-19	13:00

QUALITY CONTROL REPORT

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Conventionals — QUALITY CONTROL REPORT

SAMPLE ID		BATCH ID	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Percent Solids			**Method: SM 2540 B**			**Fraction: NA**		**Prepared: 24-Apr-19**			**Analyzed: 24-Apr-19**		
61934-B1	QAQC Procedural Blank	C-43015	ND	0.1	0.1	%							
61946-R2	C1_912035DNBBOG18K	C-43015	22.3	0.1	0.1	%					1	25	PASS
61935-B1	QAQC Procedural Blank	C-43016	ND	0.1	0.1	%							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19	
(PCB030)	NA	95			% Recovery	100	95	44 - 124%	PASS			
(PCB112)	NA	98			% Recovery	100	98	49 - 133%	PASS			
(PCB198)	NA	95			% Recovery	100	95	44 - 158%	PASS			
(TCMX)	NA	90			% Recovery	100	90	38 - 122%	PASS			
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g							
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g							
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g							
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g							
4,4'-DDE	NA	ND	0.193	0.5	ng/wet g							
4,4'-DDMU	NA	ND	1	5	ng/wet g							
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g							
Aldrin	NA	ND	0.25	0.5	ng/wet g							
BHC-alpha	NA	ND	0.25	0.5	ng/wet g							
BHC-beta	NA	ND	0.25	0.5	ng/wet g							
BHC-gamma	NA	ND	0.25	0.5	ng/wet g							
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g							
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g							
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g							
DCPA (Dacthal)	NA	ND	5	10	ng/wet g							
Dicofol	NA	ND	1	5	ng/wet g							
Dieldrin	NA	ND	0.1	0.2	ng/wet g							
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g							
Endrin	NA	ND	0.25	0.5	ng/wet g							
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g							
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g							
Heptachlor	NA	ND	0.25	0.5	ng/wet g							
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g							
Mirex	NA	ND	0.25	0.5	ng/wet g							
Oxychlordane	NA	ND	0.25	0.5	ng/wet g							
Perthane	NA	ND	5	10	ng/wet g							
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19	
(PCB030)	NA	91			% Recovery	100	0	91	44 - 124%	PASS		
(PCB112)	NA	91			% Recovery	100	0	91	49 - 133%	PASS		
(PCB198)	NA	88			% Recovery	100	0	88	44 - 158%	PASS		
(TCMX)	NA	87			% Recovery	100	0	87	38 - 122%	PASS		
2,4'-DDD	NA	495	0.267	0.5	ng/wet g	500	0	99	50 - 150%	PASS		
2,4'-DDE	NA	459	0.2	0.5	ng/wet g	500	0	92	50 - 150%	PASS		
2,4'-DDT	NA	487	0.194	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
4,4'-DDD	NA	530	0.198	0.5	ng/wet g	500	0	106	50 - 150%	PASS		
4,4'-DDE	NA	476	0.193	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
4,4'-DDMU	NA	495	1	5	ng/wet g	500	0	99	50 - 150%	PASS		
4,4'-DDT	NA	543	0.128	0.5	ng/wet g	500	0	109	50 - 150%	PASS		
Aldrin	NA	475	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
BHC-alpha	NA	493	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS		
BHC-beta	NA	514	0.25	0.5	ng/wet g	500	0	103	50 - 150%	PASS		
BHC-gamma	NA	484	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
Chlordane-alpha	NA	452	0.187	0.5	ng/wet g	500	0	90	50 - 150%	PASS		
Chlordane-gamma	NA	495	0.179	0.5	ng/wet g	500	0	99	50 - 150%	PASS		
cis-Nonachlor	NA	471	0.192	0.5	ng/wet g	500	0	94	50 - 150%	PASS		
DCPA (Dacthal)	NA	497	5	10	ng/wet g	500	0	99	50 - 150%	PASS		
Dicofol	NA	289	1	5	ng/wet g	500	0	58	50 - 150%	PASS		
Dieldrin	NA	506	0.1	0.2	ng/wet g	500	0	101	50 - 150%	PASS		
Endosulfan Sulfate	NA	530	0.25	0.5	ng/wet g	500	0	106	50 - 150%	PASS		
Endosulfan-I	NA	436	0.25	0.5	ng/wet g	500	0	87	50 - 150%	PASS		
Endosulfan-II	NA	390	0.25	0.5	ng/wet g	500	0	78	50 - 150%	PASS		
Endrin	NA	495	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS		
Endrin Aldehyde	NA	144	0.25	0.5	ng/wet g	500	0	29	50 - 150%	FAIL		1,Q
Endrin Ketone	NA	519	0.25	0.5	ng/wet g	500	0	104	50 - 150%	PASS		
Heptachlor	NA	511	0.25	0.5	ng/wet g	500	0	102	50 - 150%	PASS		
Heptachlor Epoxide	NA	491	0.25	0.5	ng/wet g	500	0	98	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	621	0.25	0.5	ng/wet g	500	0	124	50 - 150%	PASS			
Mirex	NA	457	0.25	0.5	ng/wet g	500	0	91	50 - 150%	PASS			
Oxychlordane	NA	465	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS			
Perthane	NA	546	5	10	ng/wet g	500	0	109	50 - 150%	PASS			
trans-Nonachlor	NA	461	0.186	0.5	ng/wet g	500	0	92	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61934-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**			
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19			
(PCB030)	NA	91			% Recovery	100	0	91	44 - 124%	PASS	0	30	PASS	
(PCB112)	NA	88			% Recovery	100	0	88	49 - 133%	PASS	3	30	PASS	
(PCB198)	NA	91			% Recovery	100	0	91	44 - 158%	PASS	3	30	PASS	
(TCMX)	NA	84			% Recovery	100	0	84	38 - 122%	PASS	4	30	PASS	
2,4'-DDD	NA	499	0.267	0.5	ng/wet g	500	0	100	50 - 150%	PASS	1	25	PASS	
2,4'-DDE	NA	453	0.2	0.5	ng/wet g	500	0	91	50 - 150%	PASS	1	25	PASS	
2,4'-DDT	NA	485	0.194	0.5	ng/wet g	500	0	97	50 - 150%	PASS	0	25	PASS	
4,4'-DDD	NA	533	0.198	0.5	ng/wet g	500	0	107	50 - 150%	PASS	1	25	PASS	
4,4'-DDE	NA	467	0.193	0.5	ng/wet g	500	0	93	50 - 150%	PASS	2	25	PASS	
4,4'-DDMU	NA	488	1	5	ng/wet g	500	0	98	50 - 150%	PASS	1	25	PASS	
4,4'-DDT	NA	565	0.128	0.5	ng/wet g	500	0	113	50 - 150%	PASS	4	25	PASS	
Aldrin	NA	489	0.25	0.5	ng/wet g	500	0	98	50 - 150%	PASS	3	25	PASS	
BHC-alpha	NA	478	0.25	0.5	ng/wet g	500	0	96	50 - 150%	PASS	3	25	PASS	
BHC-beta	NA	486	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS	6	25	PASS	
BHC-gamma	NA	486	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS	0	25	PASS	
Chlordane-alpha	NA	445	0.187	0.5	ng/wet g	500	0	89	50 - 150%	PASS	1	25	PASS	
Chlordane-gamma	NA	475	0.179	0.5	ng/wet g	500	0	95	50 - 150%	PASS	4	25	PASS	
cis-Nonachlor	NA	462	0.192	0.5	ng/wet g	500	0	92	50 - 150%	PASS	2	25	PASS	
DCPA (Dacthal)	NA	496	5	10	ng/wet g	500	0	99	50 - 150%	PASS	0	25	PASS	
Dicofol	NA	251	1	5	ng/wet g	500	0	50	50 - 150%	PASS	15	25	PASS	
Dieldrin	NA	493	0.1	0.2	ng/wet g	500	0	99	50 - 150%	PASS	2	25	PASS	
Endosulfan Sulfate	NA	560	0.25	0.5	ng/wet g	500	0	112	50 - 150%	PASS	6	25	PASS	
Endosulfan-I	NA	445	0.25	0.5	ng/wet g	500	0	89	50 - 150%	PASS	2	25	PASS	
Endosulfan-II	NA	356	0.25	0.5	ng/wet g	500	0	71	50 - 150%	PASS	9	25	PASS	
Endrin	NA	517	0.25	0.5	ng/wet g	500	0	103	50 - 150%	PASS	4	25	PASS	
Endrin Aldehyde	NA	185	0.25	0.5	ng/wet g	500	0	37	50 - 150%	FAIL	24	25	PASS	1,Q
Endrin Ketone	NA	551	0.25	0.5	ng/wet g	500	0	110	50 - 150%	PASS	6	25	PASS	
Heptachlor	NA	523	0.25	0.5	ng/wet g	500	0	105	50 - 150%	PASS	3	25	PASS	
Heptachlor Epoxide	NA	506	0.25	0.5	ng/wet g	500	0	101	50 - 150%	PASS	3	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	645	0.25	0.5	ng/wet g	500	0	129	50 - 150%	PASS	4	25	PASS	
Mirex	NA	477	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS	4	25	PASS	
Oxychlordane	NA	470	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS	1	25	PASS	
Perthane	NA	552	5	10	ng/wet g	500	0	110	50 - 150%	PASS	1	25	PASS	
trans-Nonachlor	NA	455	0.186	0.5	ng/wet g	500	0	91	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(PCB030)	NA	89			% Recovery	100	89	44 - 124%	PASS			
(PCB112)	NA	93			% Recovery	100	93	49 - 133%	PASS			
(PCB198)	NA	92			% Recovery	100	92	44 - 158%	PASS			
(TCMX)	NA	86			% Recovery	100	86	38 - 122%	PASS			
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g							
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g							
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g							
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g							
4,4'-DDE	NA	ND	0.193	0.5	ng/wet g							
4,4'-DDMU	NA	ND	1	5	ng/wet g							
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g							
Aldrin	NA	ND	0.25	0.5	ng/wet g							
BHC-alpha	NA	ND	0.25	0.5	ng/wet g							
BHC-beta	NA	ND	0.25	0.5	ng/wet g							
BHC-gamma	NA	ND	0.25	0.5	ng/wet g							
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g							
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g							
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g							
DCPA (Dacthal)	NA	ND	5	10	ng/wet g							
Dicofol	NA	ND	1	5	ng/wet g							
Dieldrin	NA	ND	0.1	0.2	ng/wet g							
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g							
Endrin	NA	ND	0.25	0.5	ng/wet g							
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g							
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g							
Heptachlor	NA	ND	0.25	0.5	ng/wet g							
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g							
Mirex	NA	ND	0.25	0.5	ng/wet g							
Oxychlordane	NA	ND	0.25	0.5	ng/wet g							
Perthane	NA	ND	5	10	ng/wet g							
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(PCB030)	NA	88			% Recovery	100	0	88	44 - 124%	PASS		
(PCB112)	NA	89			% Recovery	100	0	89	49 - 133%	PASS		
(PCB198)	NA	87			% Recovery	100	0	87	44 - 158%	PASS		
(TCMX)	NA	84			% Recovery	100	0	84	38 - 122%	PASS		
2,4'-DDD	NA	491	0.267	0.5	ng/wet g	500	0	98	50 - 150%	PASS		
2,4'-DDE	NA	465	0.2	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
2,4'-DDT	NA	492	0.194	0.5	ng/wet g	500	0	98	50 - 150%	PASS		
4,4'-DDD	NA	486	0.198	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
4,4'-DDE	NA	473	0.193	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
4,4'-DDMU	NA	475	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
4,4'-DDT	NA	518	0.128	0.5	ng/wet g	500	0	104	50 - 150%	PASS		
Aldrin	NA	487	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
BHC-alpha	NA	465	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
BHC-beta	NA	456	0.25	0.5	ng/wet g	500	0	91	50 - 150%	PASS		
BHC-gamma	NA	473	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
Chlordane-alpha	NA	465	0.187	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
Chlordane-gamma	NA	466	0.179	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
cis-Nonachlor	NA	459	0.192	0.5	ng/wet g	500	0	92	50 - 150%	PASS		
DCPA (Dacthal)	NA	484	5	10	ng/wet g	500	0	97	50 - 150%	PASS		
Dicofol	NA	601	1	5	ng/wet g	500	0	120	50 - 150%	PASS		
Dieldrin	NA	486	0.1	0.2	ng/wet g	500	0	97	50 - 150%	PASS		
Endosulfan Sulfate	NA	481	0.25	0.5	ng/wet g	500	0	96	50 - 150%	PASS		
Endosulfan-I	NA	328	0.25	0.5	ng/wet g	500	0	66	50 - 150%	PASS		
Endosulfan-II	NA	269	0.25	0.5	ng/wet g	500	0	54	50 - 150%	PASS		
Endrin	NA	474	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
Endrin Aldehyde	NA	143	0.25	0.5	ng/wet g	500	0	29	50 - 150%	FAIL		1,Q
Endrin Ketone	NA	464	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
Heptachlor	NA	468	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS		
Heptachlor Epoxide	NA	454	0.25	0.5	ng/wet g	500	0	91	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	496	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS			
Mirex	NA	471	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS			
Oxychlordane	NA	471	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS			
Perthane	NA	495	5	10	ng/wet g	500	0	99	50 - 150%	PASS			
trans-Nonachlor	NA	445	0.186	0.5	ng/wet g	500	0	89	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61935-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 11-May-19		
(PCB030)	NA	86			% Recovery	100	0	86	44 - 124%	PASS	2	30	PASS	
(PCB112)	NA	85			% Recovery	100	0	85	49 - 133%	PASS	5	30	PASS	
(PCB198)	NA	80			% Recovery	100	0	80	44 - 158%	PASS	8	30	PASS	
(TCMX)	NA	80			% Recovery	100	0	80	38 - 122%	PASS	5	30	PASS	
2,4'-DDD	NA	476	0.267	0.5	ng/wet g	500	0	95	50 - 150%	PASS	3	25	PASS	
2,4'-DDE	NA	448	0.2	0.5	ng/wet g	500	0	90	50 - 150%	PASS	3	25	PASS	
2,4'-DDT	NA	485	0.194	0.5	ng/wet g	500	0	97	50 - 150%	PASS	1	25	PASS	
4,4'-DDD	NA	477	0.198	0.5	ng/wet g	500	0	95	50 - 150%	PASS	2	25	PASS	
4,4'-DDE	NA	469	0.193	0.5	ng/wet g	500	0	94	50 - 150%	PASS	1	25	PASS	
4,4'-DDMU	NA	478	1	5	ng/wet g	500	0	96	50 - 150%	PASS	1	25	PASS	
4,4'-DDT	NA	517	0.128	0.5	ng/wet g	500	0	103	50 - 150%	PASS	1	25	PASS	
Aldrin	NA	485	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS	0	25	PASS	
BHC-alpha	NA	483	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS	4	25	PASS	
BHC-beta	NA	476	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS	4	25	PASS	
BHC-gamma	NA	470	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS	1	25	PASS	
Chlordane-alpha	NA	445	0.187	0.5	ng/wet g	500	0	89	50 - 150%	PASS	4	25	PASS	
Chlordane-gamma	NA	450	0.179	0.5	ng/wet g	500	0	90	50 - 150%	PASS	3	25	PASS	
cis-Nonachlor	NA	441	0.192	0.5	ng/wet g	500	0	88	50 - 150%	PASS	4	25	PASS	
DCPA (Dacthal)	NA	470	5	10	ng/wet g	500	0	94	50 - 150%	PASS	3	25	PASS	
Dicofol	NA	585	1	5	ng/wet g	500	0	117	50 - 150%	PASS	3	25	PASS	
Dieldrin	NA	470	0.1	0.2	ng/wet g	500	0	94	50 - 150%	PASS	3	25	PASS	
Endosulfan Sulfate	NA	463	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS	3	25	PASS	
Endosulfan-I	NA	325	0.25	0.5	ng/wet g	500	0	65	50 - 150%	PASS	2	25	PASS	
Endosulfan-II	NA	290	0.25	0.5	ng/wet g	500	0	58	50 - 150%	PASS	7	25	PASS	
Endrin	NA	458	0.25	0.5	ng/wet g	500	0	92	50 - 150%	PASS	3	25	PASS	
Endrin Aldehyde	NA	149	0.25	0.5	ng/wet g	500	0	30	50 - 150%	FAIL	3	25	PASS	1,Q
Endrin Ketone	NA	432	0.25	0.5	ng/wet g	500	0	86	50 - 150%	PASS	8	25	PASS	
Heptachlor	NA	464	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS	1	25	PASS	
Heptachlor Epoxide	NA	439	0.25	0.5	ng/wet g	500	0	88	50 - 150%	PASS	3	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	495	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS	0	25	PASS	
Mirex	NA	462	0.25	0.5	ng/wet g	500	0	92	50 - 150%	PASS	2	25	PASS	
Oxychlordane	NA	470	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS	0	25	PASS	
Perthane	NA	494	5	10	ng/wet g	500	0	99	50 - 150%	PASS	0	25	PASS	
trans-Nonachlor	NA	446	0.186	0.5	ng/wet g	500	0	89	50 - 150%	PASS	0	25	PASS	
Sample ID: 61939-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**			**Sampled:**				**Received:**		
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 11-May-19		
(PCB030)	NA	149			% Recovery	100		149	41 - 154%	PASS				
(PCB112)	NA	130			% Recovery	100		130	45 - 162%	PASS				
(PCB198)	NA	73			% Recovery	100		73	36 - 120%	PASS				
(TCMX)	NA	188			% Recovery	100		188	41 - 166%	FAIL				
2,4'-DDD	NA	31	0.267	0.5	ng/wet g	3.31		937	50 - 150%	FAIL				1
2,4'-DDE	NA	34.9	0.2	0.5	ng/wet g	3.39		1029	50 - 150%	FAIL				1
2,4'-DDT	NA	140	0.194	0.5	ng/wet g	15.7		892	50 - 150%	FAIL				1
4,4'-DDD	NA	48.7	0.198	0.5	ng/wet g	45.9		106	50 - 150%	PASS				
4,4'-DDE	NA	1020	0.193	0.5	ng/wet g	720		142	50 - 150%	PASS				
4,4'-DDT	NA	69.1	0.128	0.5	ng/wet g	59.5		116	50 - 150%	PASS				
BHC-alpha	NA	2.2	0.25	0.5	ng/wet g	1.06		208	50 - 150%	FAIL				1
Chlordane-alpha	NA	55.6	0.187	0.5	ng/wet g	49		113	50 - 150%	PASS				
Chlordane-gamma	NA	18.4	0.179	0.5	ng/wet g	12.8		144	50 - 150%	PASS				
cis-Nonachlor	NA	58.6	0.192	0.5	ng/wet g	54.1		108	50 - 150%	PASS				
Dieldrin	NA	112	0.1	0.2	ng/wet g	80.8		139	50 - 150%	PASS				
Heptachlor Epoxide	NA	15.5	0.25	0.5	ng/wet g	13.4		116	50 - 150%	PASS				
Mirex	NA	7.57	0.25	0.5	ng/wet g	5.09		149	50 - 150%	PASS				
Oxychlordane	NA	24.1	0.25	0.5	ng/wet g	23.6		102	50 - 150%	PASS				
trans-Nonachlor	NA	168	0.186	0.5	ng/wet g	127		132	50 - 150%	PASS				

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61940-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 04-May-19		
(PCB030)	NA	152			% Recovery	100	152	41 - 154%	PASS			
(PCB112)	NA	137			% Recovery	100	137	45 - 162%	PASS			
(PCB198)	NA	89			% Recovery	100	89	36 - 120%	PASS			
(TCMX)	NA	195			% Recovery	100	195	41 - 166%	FAIL			
2,4'-DDD	NA	24.6	0.267	0.5	ng/wet g	3.31	743	50 - 150%	FAIL			1
2,4'-DDE	NA	31.6	0.2	0.5	ng/wet g	3.39	932	50 - 150%	FAIL			1
2,4'-DDT	NA	96	0.194	0.5	ng/wet g	15.7	611	50 - 150%	FAIL			1
4,4'-DDD	NA	41.6	0.198	0.5	ng/wet g	45.9	91	50 - 150%	PASS			
4,4'-DDE	NA	989	0.193	0.5	ng/wet g	720	137	50 - 150%	PASS			
4,4'-DDT	NA	73.5	0.128	0.5	ng/wet g	59.5	124	50 - 150%	PASS			
BHC-alpha	NA	3.85	0.25	0.5	ng/wet g	1.06	363	50 - 150%	FAIL			1
Chlordane-alpha	NA	70.5	0.187	0.5	ng/wet g	49	144	50 - 150%	PASS			
Chlordane-gamma	NA	18.9	0.179	0.5	ng/wet g	12.8	148	50 - 150%	PASS			
cis-Nonachlor	NA	65.2	0.192	0.5	ng/wet g	54.1	121	50 - 150%	PASS			
Dieldrin	NA	118	0.1	0.2	ng/wet g	80.8	146	50 - 150%	PASS			
Heptachlor Epoxide	NA	14.5	0.25	0.5	ng/wet g	13.4	108	50 - 150%	PASS			
Mirex	NA	6.16	0.25	0.5	ng/wet g	5.09	121	50 - 150%	PASS			
Oxychlordane	NA	32.2	0.25	0.5	ng/wet g	23.6	136	50 - 150%	PASS			
trans-Nonachlor	NA	170	0.186	0.5	ng/wet g	127	134	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61946-MS1	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**					**Received: 20-Feb-19**	
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19					Analyzed: 04-May-19	
(PCB030)	NA	103			% Recovery	100	0	103	51 - 137%	PASS			
(PCB112)	NA	121			% Recovery	100	0	121	53 - 150%	PASS			
(PCB198)	NA	70			% Recovery	100	0	70	25 - 146%	PASS			
(TCMX)	NA	116			% Recovery	100	0	116	50 - 144%	PASS			
2,4'-DDD	NA	129	0.267	0.5	ng/wet g	96.2	0	134	50 - 150%	PASS			
2,4'-DDE	NA	107	0.2	0.5	ng/wet g	96.2	0	111	50 - 150%	PASS			
2,4'-DDT	NA	122	0.194	0.5	ng/wet g	96.2	0	127	50 - 150%	PASS			
4,4'-DDD	NA	97.7	0.198	0.5	ng/wet g	96.2	0	102	50 - 150%	PASS			
4,4'-DDE	NA	125	0.193	0.5	ng/wet g	96.2	6.99	123	50 - 150%	PASS			
4,4'-DDMU	NA	109	1	5	ng/wet g	96.2	0	113	50 - 150%	PASS			
4,4'-DDT	NA	114	0.128	0.5	ng/wet g	96.2	0	119	50 - 150%	PASS			
Aldrin	NA	94.6	0.25	0.5	ng/wet g	96.2	0	98	50 - 150%	PASS			
BHC-alpha	NA	116	0.25	0.5	ng/wet g	96.2	0	121	50 - 150%	PASS			
BHC-beta	NA	80.3	0.25	0.5	ng/wet g	96.2	0	83	50 - 150%	PASS			
BHC-gamma	NA	108	0.25	0.5	ng/wet g	96.2	0	112	50 - 150%	PASS			
Chlordane-alpha	NA	99.2	0.187	0.5	ng/wet g	96.2	0	103	50 - 150%	PASS			
Chlordane-gamma	NA	96.3	0.179	0.5	ng/wet g	96.2	0	100	50 - 150%	PASS			
cis-Nonachlor	NA	94.5	0.192	0.5	ng/wet g	96.2	0	98	50 - 150%	PASS			
DCPA (Dacthal)	NA	92.5	5	10	ng/wet g	96.2	0	96	50 - 150%	PASS			
Dicofol	NA	65.9	1	5	ng/wet g	96.2	0	69	50 - 150%	PASS			
Dieldrin	NA	123	0.1	0.2	ng/wet g	96.2	0	128	50 - 150%	PASS			
Endosulfan Sulfate	NA	118	0.25	0.5	ng/wet g	96.2	0	123	50 - 150%	PASS			
Endosulfan-I	NA	3010	0.25	0.5	ng/wet g	96.2	0	3129	50 - 150%	FAIL			1
Endosulfan-II	NA	90.4	0.25	0.5	ng/wet g	96.2	0	94	50 - 150%	PASS			
Endrin	NA	135	0.25	0.5	ng/wet g	96.2	0	140	50 - 150%	PASS			
Endrin Aldehyde	NA	61.5	0.25	0.5	ng/wet g	96.2	0	64	50 - 150%	PASS			
Endrin Ketone	NA	101	0.25	0.5	ng/wet g	96.2	0	105	50 - 150%	PASS			
Heptachlor	NA	101	0.25	0.5	ng/wet g	96.2	0	105	50 - 150%	PASS			
Heptachlor Epoxide	NA	98	0.25	0.5	ng/wet g	96.2	0	102	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	102	0.25	0.5	ng/wet g	96.2	0	106	50 - 150%	PASS			
Mirex	NA	80	0.25	0.5	ng/wet g	96.2	0	83	50 - 150%	PASS			
Oxychlordane	NA	103	0.25	0.5	ng/wet g	96.2	0	107	50 - 150%	PASS			
Perthane	NA	142	5	10	ng/wet g	96.2	0	148	50 - 150%	PASS			
trans-Nonachlor	NA	103	0.186	0.5	ng/wet g	96.2	0	107	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61946-MS2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
	Method: EPA 8270D				Batch ID: O-21062			Prepared: 24-Apr-19				Analyzed: 04-May-19		
(PCB030)	NA	108			% Recovery	100	0	108	51 - 137%	PASS	5	30	PASS	
(PCB112)	NA	112			% Recovery	100	0	112	53 - 150%	PASS	8	30	PASS	
(PCB198)	NA	60			% Recovery	100	0	60	25 - 146%	PASS	15	30	PASS	
(TCMX)	NA	119			% Recovery	100	0	119	50 - 144%	PASS	3	30	PASS	
2,4'-DDD	NA	116	0.267	0.5	ng/wet g	94.6	0	123	50 - 150%	PASS	9	25	PASS	
2,4'-DDE	NA	101	0.2	0.5	ng/wet g	94.6	0	107	50 - 150%	PASS	4	25	PASS	
2,4'-DDT	NA	110	0.194	0.5	ng/wet g	94.6	0	116	50 - 150%	PASS	9	25	PASS	
4,4'-DDD	NA	94.8	0.198	0.5	ng/wet g	94.6	0	100	50 - 150%	PASS	2	25	PASS	
4,4'-DDE	NA	116	0.193	0.5	ng/wet g	94.6	6.99	115	50 - 150%	PASS	7	25	PASS	
4,4'-DDMU	NA	105	1	5	ng/wet g	94.6	0	111	50 - 150%	PASS	2	25	PASS	
4,4'-DDT	NA	101	0.128	0.5	ng/wet g	94.6	0	107	50 - 150%	PASS	11	25	PASS	
Aldrin	NA	95.9	0.25	0.5	ng/wet g	94.6	0	101	50 - 150%	PASS	3	25	PASS	
BHC-alpha	NA	119	0.25	0.5	ng/wet g	94.6	0	126	50 - 150%	PASS	4	25	PASS	
BHC-beta	NA	95.7	0.25	0.5	ng/wet g	94.6	0	101	50 - 150%	PASS	20	25	PASS	
BHC-gamma	NA	111	0.25	0.5	ng/wet g	94.6	0	117	50 - 150%	PASS	4	25	PASS	
Chlordane-alpha	NA	92.2	0.187	0.5	ng/wet g	94.6	0	97	50 - 150%	PASS	6	25	PASS	
Chlordane-gamma	NA	91.8	0.179	0.5	ng/wet g	94.6	0	97	50 - 150%	PASS	3	25	PASS	
cis-Nonachlor	NA	83.2	0.192	0.5	ng/wet g	94.6	0	88	50 - 150%	PASS	11	25	PASS	
DCPA (Dacthal)	NA	91.9	5	10	ng/wet g	94.6	0	97	50 - 150%	PASS	1	25	PASS	
Dicofol	NA	114	1	5	ng/wet g	94.6	0	121	50 - 150%	PASS	55	25	FAIL	
Dieldrin	NA	112	0.1	0.2	ng/wet g	94.6	0	118	50 - 150%	PASS	8	25	PASS	
Endosulfan Sulfate	NA	107	0.25	0.5	ng/wet g	94.6	0	113	50 - 150%	PASS	8	25	PASS	
Endosulfan-I	NA	3220	0.25	0.5	ng/wet g	94.6	0	3404	50 - 150%	FAIL	8	25	PASS	1
Endosulfan-II	NA	75.6	0.25	0.5	ng/wet g	94.6	0	80	50 - 150%	PASS	16	25	PASS	
Endrin	NA	141	0.25	0.5	ng/wet g	94.6	0	149	50 - 150%	PASS	6	25	PASS	
Endrin Aldehyde	NA	45.4	0.25	0.5	ng/wet g	94.6	0	48	50 - 150%	FAIL	29	25	FAIL	1,Q
Endrin Ketone	NA	87.9	0.25	0.5	ng/wet g	94.6	0	93	50 - 150%	PASS	12	25	PASS	
Heptachlor	NA	104	0.25	0.5	ng/wet g	94.6	0	110	50 - 150%	PASS	5	25	PASS	
Heptachlor Epoxide	NA	94.4	0.25	0.5	ng/wet g	94.6	0	100	50 - 150%	PASS	2	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	93.9	0.25	0.5	ng/wet g	94.6	0	99	50 - 150%	PASS	7	25	PASS	
Mirex	NA	71.8	0.25	0.5	ng/wet g	94.6	0	76	50 - 150%	PASS	9	25	PASS	
Oxychlordane	NA	103	0.25	0.5	ng/wet g	94.6	0	109	50 - 150%	PASS	2	25	PASS	
Perthane	NA	129	5	10	ng/wet g	94.6	0	136	50 - 150%	PASS	8	25	PASS	
trans-Nonachlor	NA	94.6	0.186	0.5	ng/wet g	94.6	0	100	50 - 150%	PASS	7	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61946-R2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**				**Received: 20-Feb-19**			
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 05-May-19			
(PCB030)	NA	104			% Recovery	100	104	51 - 137%	PASS		1	30	PASS	
(PCB112)	NA	108			% Recovery	100	108	53 - 150%	PASS		5	30	PASS	
(PCB198)	NA	72			% Recovery	100	72	25 - 146%	PASS		9	30	PASS	
(TCMX)	NA	113			% Recovery	100	113	50 - 144%	PASS		7	30	PASS	
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g						0	25	PASS	
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g						0	25	PASS	
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g						0	25	PASS	
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g						0	25	PASS	
4,4'-DDE	NA	5.9	0.193	0.5	ng/wet g						31	25	FAIL	NH
4,4'-DDMU	NA	ND	1	5	ng/wet g						0	25	PASS	
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g						0	25	PASS	
Aldrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
BHC-alpha	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
BHC-beta	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
BHC-gamma	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g						0	25	PASS	
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g						0	25	PASS	
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g						0	25	PASS	
DCPA (Dacthal)	NA	ND	5	10	ng/wet g						0	25	PASS	
Dicofol	NA	ND	1	5	ng/wet g						0	25	PASS	
Dieldrin	NA	ND	0.1	0.2	ng/wet g						0	25	PASS	
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Heptachlor	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Mirex	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Oxychlordane	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Perthane	NA	ND	5	10	ng/wet g					0	25 PASS	
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g					0	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g								
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g								
Sample ID: 61934-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 23-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.18	0.025	0.05	µg/wet g	2	0	109	50 - 150%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	974	1E-05	0.00002	µg/wet g	1000	0	97	50 - 150%	PASS			
Sample ID: 61934-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 23-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.19	0.025	0.05	µg/wet g	2	0	110	50 - 150%	PASS	1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	1010	1E-05	0.00002	µg/wet g	1000	0	101	50 - 150%	PASS	4	25 PASS	
Sample ID: 61935-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g								
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g								
Sample ID: 61935-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.19	0.025	0.05	µg/wet g	2	0	110	50 - 150%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	1040	1E-05	0.00002	µg/wet g	1000	0	104	50 - 150%	PASS			
Sample ID: 61935-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.18	0.025	0.05	µg/wet g	2	0	109	50 - 150%	PASS	1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	1020	1E-05	0.00002	µg/wet g	1000	0	102	50 - 150%	PASS	2	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61936-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.04	0.025	0.05	µg/dry g	2.06		99	70 - 130%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	0.0382	1E-05	0.00002	µg/dry g	0.0371		103	70 - 130%	PASS			
Sample ID: 61937-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.15	0.025	0.05	µg/dry g	2.06		104	70 - 130%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	0.0376	1E-05	0.00002	µg/dry g	0.0371		101	70 - 130%	PASS			
Sample ID: 61938-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	2.01	0.025	0.05	µg/dry g	2.06		98	70 - 130%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	0.0362	1E-05	0.00002	µg/dry g	0.0371		98	70 - 130%	PASS			
Sample ID: 61941-MS1	**C1_90110DANABOG18WCR White Croak**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	55.1	0.025	0.05	µg/wet g	50.5	0.735	108	50 - 150%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	1.25	1E-05	0.00002	µg/wet g	0.631	0.6	103	50 - 150%	PASS			
Sample ID: 61941-MS2	**C1_90110DANABOG18WCR White Croak**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	55.8	0.025	0.05	µg/wet g	50.5	0.735	109	50 - 150%	PASS	1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	1.26	1E-05	0.00002	µg/wet g	0.631	0.6	105	50 - 150%	PASS	2	25 PASS	
Sample ID: 61941-R2	**C1_90110DANABOG18WCR White Croak**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14123			Prepared: 22-May-19				Analyzed: 29-May-19	
Selenium (Se)	NA	0.147024	0.025	0.05	µg/wet g						4	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15148			Prepared: 22-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	0.121907	1E-05	0.00002	µg/wet g						1	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61951-MS1	**C3_91203SDNBOG18PCM Pacific Chub**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	47.4	0.025	0.05	µg/wet g	41.3	1.7	111	50 - 150%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.868	1E-05	0.00002	µg/wet g	0.517	0.358	99	50 - 150%	PASS				
Sample ID: 61951-MS2	**C3_91203SDNBOG18PCM Pacific Chub**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	49.1	0.025	0.05	µg/wet g	41.3	1.7	112	50 - 150%	PASS	1	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.873	1E-05	0.00002	µg/wet g	0.517	0.358	100	50 - 150%	PASS	1	25	PASS	
Sample ID: 61951-R2	**C3_91203SDNBOG18PCM Pacific Chub**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14124			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	0.383626	0.025	0.05	µg/wet g						4	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15149			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.084583	1E-05	0.00002	µg/wet g						4	25	PASS	
Sample ID: 61961-MS1	**C1_90606MISSBOG18BLS Black Surf Per**				**Matrix: Tissue**			**Sampled: 11-Feb-19**				**Received: 20-Feb-19**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	52.6	0.025	0.05	µg/wet g	51.1	0.794	101	50 - 150%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.792	1E-05	0.00002	µg/wet g	0.639	0.109	107	50 - 150%	PASS				
Sample ID: 61961-MS2	**C1_90606MISSBOG18BLS Black Surf Per**				**Matrix: Tissue**			**Sampled: 11-Feb-19**				**Received: 20-Feb-19**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	53.5	0.025	0.05	µg/wet g	51.1	0.794	103	50 - 150%	PASS	2	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.786	1E-05	0.00002	µg/wet g	0.639	0.109	106	50 - 150%	PASS	1	25	PASS	
Sample ID: 61961-R2	**C1_90606MISSBOG18BLS Black Surf Per**				**Matrix: Tissue**			**Sampled: 11-Feb-19**				**Received: 20-Feb-19**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	0.16328	0.025	0.05	µg/wet g						2	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.02143	1E-05	0.00002	µg/wet g						7	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 63650-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g									
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g									
Sample ID: 63650-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	2.12	0.025	0.05	µg/wet g	2	0	106	50 - 150%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	1040	1E-05	0.00002	µg/wet g	1000	0	104	50 - 150%	PASS				
Sample ID: 63650-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14125			Prepared: 22-May-19				Analyzed: 29-May-19		
Selenium (Se)	NA	2.12	0.025	0.05	µg/wet g	2	0	106	50 - 150%	PASS	0	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15150			Prepared: 22-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	1030	1E-05	0.00002	µg/wet g	1000	0	103	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 04-May-19		
PCB003	NA	ND	0.25	0.5	ng/wet g							
PCB005	NA	ND	0.25	0.5	ng/wet g							
PCB008	NA	ND	0.017	0.5	ng/wet g							
PCB015	NA	ND	0.25	0.5	ng/wet g							
PCB018	NA	ND	0.029	0.5	ng/wet g							
PCB027	NA	ND	0.25	0.5	ng/wet g							
PCB028	NA	ND	0.023	0.5	ng/wet g							
PCB029	NA	ND	0.25	0.5	ng/wet g							
PCB031	NA	ND	0.25	0.5	ng/wet g							
PCB033	NA	ND	0.25	0.5	ng/wet g							
PCB037	NA	ND	0.06	0.5	ng/wet g							
PCB044	NA	ND	0.028	0.5	ng/wet g							
PCB049	NA	ND	0.036	0.5	ng/wet g							
PCB052	NA	ND	0.012	0.5	ng/wet g							
PCB056(060)	NA	ND	0.25	0.5	ng/wet g							
PCB066	NA	ND	0.027	0.5	ng/wet g							
PCB070	NA	ND	0.023	0.5	ng/wet g							
PCB074	NA	ND	0.021	0.5	ng/wet g							
PCB077	NA	ND	0.018	0.5	ng/wet g							
PCB081	NA	ND	0.084	0.5	ng/wet g							
PCB087	NA	ND	0.081	0.5	ng/wet g							
PCB095	NA	ND	0.25	0.5	ng/wet g							
PCB097	NA	ND	0.25	0.5	ng/wet g							
PCB099	NA	ND	0.028	0.5	ng/wet g							
PCB101	NA	ND	0.027	0.5	ng/wet g							
PCB105	NA	ND	0.047	0.5	ng/wet g							
PCB110	NA	ND	0.074	0.5	ng/wet g							
PCB114	NA	ND	0.072	0.5	ng/wet g							
PCB118	NA	ND	0.069	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g							
PCB123	NA	ND	0.018	0.5	ng/wet g							
PCB126	NA	ND	0.086	0.5	ng/wet g							
PCB128	NA	ND	0.081	0.5	ng/wet g							
PCB137	NA	ND	0.25	0.5	ng/wet g							
PCB138	NA	ND	0.057	0.5	ng/wet g							
PCB141	NA	ND	0.25	0.5	ng/wet g							
PCB149	NA	ND	0.092	0.5	ng/wet g							
PCB151	NA	ND	0.073	0.5	ng/wet g							
PCB153	NA	ND	0.065	0.5	ng/wet g							
PCB156	NA	ND	0.089	0.5	ng/wet g							
PCB157	NA	ND	0.103	0.5	ng/wet g							
PCB158	NA	ND	0.074	0.5	ng/wet g							
PCB167	NA	ND	0.049	0.5	ng/wet g							
PCB168+132	NA	ND	0.094	0.5	ng/wet g							
PCB169	NA	ND	0.116	0.5	ng/wet g							
PCB170	NA	ND	0.118	0.5	ng/wet g							
PCB174	NA	ND	0.25	0.5	ng/wet g							
PCB177	NA	ND	0.085	0.5	ng/wet g							
PCB180	NA	ND	0.154	0.5	ng/wet g							
PCB183	NA	ND	0.056	0.5	ng/wet g							
PCB187	NA	ND	0.168	0.5	ng/wet g							
PCB189	NA	ND	0.109	0.5	ng/wet g							
PCB194	NA	ND	0.164	0.5	ng/wet g							
PCB195	NA	ND	0.093	0.5	ng/wet g							
PCB199(200)	NA	ND	0.25	0.5	ng/wet g							
PCB201	NA	ND	0.104	0.5	ng/wet g							
PCB203	NA	ND	0.25	0.5	ng/wet g							
PCB206	NA	ND	0.155	0.5	ng/wet g							
PCB209	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19	
PCB003	NA	46.5	0.25	0.5	ng/wet g	50	0	93	50 - 150%	PASS		
PCB005	NA	57.5	0.25	0.5	ng/wet g	50	0	115	50 - 150%	PASS		
PCB008	NA	42.6	0.017	0.5	ng/wet g	50	0	85	50 - 150%	PASS		
PCB015	NA	52.6	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB018	NA	48.8	0.029	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB027	NA	48.2	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB028	NA	47.3	0.023	0.5	ng/wet g	50	0	95	50 - 150%	PASS		
PCB029	NA	49.5	0.25	0.5	ng/wet g	50	0	99	50 - 150%	PASS		
PCB031	NA	51.3	0.25	0.5	ng/wet g	50	0	103	50 - 150%	PASS		
PCB033	NA	52.6	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB037	NA	56.5	0.06	0.5	ng/wet g	50	0	113	50 - 150%	PASS		
PCB044	NA	50.6	0.028	0.5	ng/wet g	50	0	101	50 - 150%	PASS		
PCB049	NA	53.5	0.036	0.5	ng/wet g	50	0	107	50 - 150%	PASS		
PCB052	NA	54.1	0.012	0.5	ng/wet g	50	0	108	50 - 150%	PASS		
PCB056(060)	NA	52.8	0.25	0.5	ng/wet g	50	0	106	50 - 150%	PASS		
PCB066	NA	51.5	0.027	0.5	ng/wet g	50	0	103	50 - 150%	PASS		
PCB070	NA	57.5	0.023	0.5	ng/wet g	50	0	115	50 - 150%	PASS		
PCB074	NA	53.8	0.021	0.5	ng/wet g	50	0	108	50 - 150%	PASS		
PCB077	NA	54.1	0.018	0.5	ng/wet g	50	0	108	50 - 150%	PASS		
PCB081	NA	55.6	0.084	0.5	ng/wet g	50	0	111	50 - 150%	PASS		
PCB087	NA	53.2	0.081	0.5	ng/wet g	50	0	106	50 - 150%	PASS		
PCB095	NA	47.6	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS		
PCB097	NA	59	0.25	0.5	ng/wet g	50	0	118	50 - 150%	PASS		
PCB099	NA	50.8	0.028	0.5	ng/wet g	50	0	102	50 - 150%	PASS		
PCB101	NA	52.7	0.027	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB105	NA	51	0.047	0.5	ng/wet g	50	0	102	50 - 150%	PASS		
PCB110	NA	52.7	0.074	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB114	NA	52.7	0.072	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB118	NA	55.1	0.069	0.5	ng/wet g	50	0	110	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	54	0.071	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB123	NA	48.5	0.018	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB126	NA	56.7	0.086	0.5	ng/wet g	50	0	113	50 - 150%	PASS			
PCB128	NA	49.4	0.081	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB137	NA	52.2	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB138	NA	53.5	0.057	0.5	ng/wet g	50	0	107	50 - 150%	PASS			
PCB141	NA	48.5	0.25	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB149	NA	47.9	0.092	0.5	ng/wet g	50	0	96	50 - 150%	PASS			
PCB151	NA	54	0.073	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB153	NA	51.4	0.065	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB156	NA	53.6	0.089	0.5	ng/wet g	50	0	107	50 - 150%	PASS			
PCB157	NA	46.3	0.103	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB158	NA	50.9	0.074	0.5	ng/wet g	50	0	102	50 - 150%	PASS			
PCB167	NA	53.7	0.049	0.5	ng/wet g	50	0	107	50 - 150%	PASS			
PCB168+132	NA	93.7	0.094	0.5	ng/wet g	100	0	94	50 - 150%	PASS			
PCB169	NA	57.5	0.116	0.5	ng/wet g	50	0	115	50 - 150%	PASS			
PCB170	NA	49.4	0.118	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB174	NA	52.7	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS			
PCB177	NA	51.7	0.085	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB180	NA	52.7	0.154	0.5	ng/wet g	50	0	105	50 - 150%	PASS			
PCB183	NA	50.6	0.056	0.5	ng/wet g	50	0	101	50 - 150%	PASS			
PCB187	NA	54.1	0.168	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB189	NA	50.5	0.109	0.5	ng/wet g	50	0	101	50 - 150%	PASS			
PCB194	NA	56.1	0.164	0.5	ng/wet g	50	0	112	50 - 150%	PASS			
PCB195	NA	51.6	0.093	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB199(200)	NA	51.4	0.25	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB201	NA	41.7	0.104	0.5	ng/wet g	50	0	83	50 - 150%	PASS			
PCB203	NA	50.8	0.25	0.5	ng/wet g	50	0	102	50 - 150%	PASS			
PCB206	NA	52.9	0.155	0.5	ng/wet g	50	0	106	50 - 150%	PASS			
PCB209	NA	45	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	
Sample ID: 61934-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19		
PCB003	NA	47.3	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	2	25	PASS
PCB005	NA	49.1	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS	16	25	PASS
PCB008	NA	41.7	0.017	0.5	ng/wet g	50	0	83	50 - 150%	PASS	2	25	PASS
PCB015	NA	51.7	0.25	0.5	ng/wet g	50	0	103	50 - 150%	PASS	2	25	PASS
PCB018	NA	53.2	0.029	0.5	ng/wet g	50	0	106	50 - 150%	PASS	8	25	PASS
PCB027	NA	49.2	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS	2	25	PASS
PCB028	NA	45.4	0.023	0.5	ng/wet g	50	0	91	50 - 150%	PASS	4	25	PASS
PCB029	NA	50.3	0.25	0.5	ng/wet g	50	0	101	50 - 150%	PASS	2	25	PASS
PCB031	NA	51.4	0.25	0.5	ng/wet g	50	0	103	50 - 150%	PASS	0	25	PASS
PCB033	NA	52.2	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS	1	25	PASS
PCB037	NA	54.6	0.06	0.5	ng/wet g	50	0	109	50 - 150%	PASS	4	25	PASS
PCB044	NA	49.8	0.028	0.5	ng/wet g	50	0	100	50 - 150%	PASS	1	25	PASS
PCB049	NA	54.3	0.036	0.5	ng/wet g	50	0	109	50 - 150%	PASS	2	25	PASS
PCB052	NA	51.8	0.012	0.5	ng/wet g	50	0	104	50 - 150%	PASS	4	25	PASS
PCB056(060)	NA	52.6	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS	1	25	PASS
PCB066	NA	54.2	0.027	0.5	ng/wet g	50	0	108	50 - 150%	PASS	5	25	PASS
PCB070	NA	51.6	0.023	0.5	ng/wet g	50	0	103	50 - 150%	PASS	11	25	PASS
PCB074	NA	55.1	0.021	0.5	ng/wet g	50	0	110	50 - 150%	PASS	2	25	PASS
PCB077	NA	56.6	0.018	0.5	ng/wet g	50	0	113	50 - 150%	PASS	5	25	PASS
PCB081	NA	54.6	0.084	0.5	ng/wet g	50	0	109	50 - 150%	PASS	2	25	PASS
PCB087	NA	54.3	0.081	0.5	ng/wet g	50	0	109	50 - 150%	PASS	3	25	PASS
PCB095	NA	50.3	0.25	0.5	ng/wet g	50	0	101	50 - 150%	PASS	6	25	PASS
PCB097	NA	58.7	0.25	0.5	ng/wet g	50	0	117	50 - 150%	PASS	1	25	PASS
PCB099	NA	50.9	0.028	0.5	ng/wet g	50	0	102	50 - 150%	PASS	0	25	PASS
PCB101	NA	52.5	0.027	0.5	ng/wet g	50	0	105	50 - 150%	PASS	0	25	PASS
PCB105	NA	48.3	0.047	0.5	ng/wet g	50	0	97	50 - 150%	PASS	5	25	PASS
PCB110	NA	53.6	0.074	0.5	ng/wet g	50	0	107	50 - 150%	PASS	2	25	PASS
PCB114	NA	52.3	0.072	0.5	ng/wet g	50	0	105	50 - 150%	PASS	0	25	PASS
PCB118	NA	56.6	0.069	0.5	ng/wet g	50	0	113	50 - 150%	PASS	3	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	53.3	0.071	0.5	ng/wet g	50	0	107	50 - 150%	PASS	1	25	PASS	
PCB123	NA	51.5	0.018	0.5	ng/wet g	50	0	103	50 - 150%	PASS	6	25	PASS	
PCB126	NA	57.6	0.086	0.5	ng/wet g	50	0	115	50 - 150%	PASS	2	25	PASS	
PCB128	NA	58.6	0.081	0.5	ng/wet g	50	0	117	50 - 150%	PASS	17	25	PASS	
PCB137	NA	52.6	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS	1	25	PASS	
PCB138	NA	52.2	0.057	0.5	ng/wet g	50	0	104	50 - 150%	PASS	3	25	PASS	
PCB141	NA	48.8	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS	1	25	PASS	
PCB149	NA	51	0.092	0.5	ng/wet g	50	0	102	50 - 150%	PASS	6	25	PASS	
PCB151	NA	53.6	0.073	0.5	ng/wet g	50	0	107	50 - 150%	PASS	1	25	PASS	
PCB153	NA	53	0.065	0.5	ng/wet g	50	0	106	50 - 150%	PASS	3	25	PASS	
PCB156	NA	53.7	0.089	0.5	ng/wet g	50	0	107	50 - 150%	PASS	0	25	PASS	
PCB157	NA	48	0.103	0.5	ng/wet g	50	0	96	50 - 150%	PASS	3	25	PASS	
PCB158	NA	51.5	0.074	0.5	ng/wet g	50	0	103	50 - 150%	PASS	1	25	PASS	
PCB167	NA	52.2	0.049	0.5	ng/wet g	50	0	104	50 - 150%	PASS	3	25	PASS	
PCB168+132	NA	96	0.094	0.5	ng/wet g	100	0	96	50 - 150%	PASS	2	25	PASS	
PCB169	NA	56.9	0.116	0.5	ng/wet g	50	0	114	50 - 150%	PASS	1	25	PASS	
PCB170	NA	53.7	0.118	0.5	ng/wet g	50	0	107	50 - 150%	PASS	8	25	PASS	
PCB174	NA	53.1	0.25	0.5	ng/wet g	50	0	106	50 - 150%	PASS	1	25	PASS	
PCB177	NA	50.8	0.085	0.5	ng/wet g	50	0	102	50 - 150%	PASS	1	25	PASS	
PCB180	NA	53.7	0.154	0.5	ng/wet g	50	0	107	50 - 150%	PASS	2	25	PASS	
PCB183	NA	51.9	0.056	0.5	ng/wet g	50	0	104	50 - 150%	PASS	3	25	PASS	
PCB187	NA	54.2	0.168	0.5	ng/wet g	50	0	108	50 - 150%	PASS	0	25	PASS	
PCB189	NA	56.3	0.109	0.5	ng/wet g	50	0	113	50 - 150%	PASS	11	25	PASS	
PCB194	NA	56.9	0.164	0.5	ng/wet g	50	0	114	50 - 150%	PASS	2	25	PASS	
PCB195	NA	52.8	0.093	0.5	ng/wet g	50	0	106	50 - 150%	PASS	3	25	PASS	
PCB199(200)	NA	50.9	0.25	0.5	ng/wet g	50	0	102	50 - 150%	PASS	1	25	PASS	
PCB201	NA	41.6	0.104	0.5	ng/wet g	50	0	83	50 - 150%	PASS	0	25	PASS	
PCB203	NA	52.9	0.25	0.5	ng/wet g	50	0	106	50 - 150%	PASS	4	25	PASS	
PCB206	NA	53.7	0.155	0.5	ng/wet g	50	0	107	50 - 150%	PASS	1	25	PASS	
PCB209	NA	47.3	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	5	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19			Analyzed: 11-May-19		
PCB003	NA	ND	0.25	0.5	ng/wet g							
PCB005	NA	ND	0.25	0.5	ng/wet g							
PCB008	NA	ND	0.017	0.5	ng/wet g							
PCB015	NA	ND	0.25	0.5	ng/wet g							
PCB018	NA	ND	0.029	0.5	ng/wet g							
PCB027	NA	ND	0.25	0.5	ng/wet g							
PCB028	NA	ND	0.023	0.5	ng/wet g							
PCB029	NA	ND	0.25	0.5	ng/wet g							
PCB031	NA	ND	0.25	0.5	ng/wet g							
PCB033	NA	ND	0.25	0.5	ng/wet g							
PCB037	NA	ND	0.06	0.5	ng/wet g							
PCB044	NA	ND	0.028	0.5	ng/wet g							
PCB049	NA	ND	0.036	0.5	ng/wet g							
PCB052	NA	ND	0.012	0.5	ng/wet g							
PCB056(060)	NA	ND	0.25	0.5	ng/wet g							
PCB066	NA	ND	0.027	0.5	ng/wet g							
PCB070	NA	ND	0.023	0.5	ng/wet g							
PCB074	NA	ND	0.021	0.5	ng/wet g							
PCB077	NA	ND	0.018	0.5	ng/wet g							
PCB081	NA	ND	0.084	0.5	ng/wet g							
PCB087	NA	ND	0.081	0.5	ng/wet g							
PCB095	NA	ND	0.25	0.5	ng/wet g							
PCB097	NA	ND	0.25	0.5	ng/wet g							
PCB099	NA	ND	0.028	0.5	ng/wet g							
PCB101	NA	ND	0.027	0.5	ng/wet g							
PCB105	NA	ND	0.047	0.5	ng/wet g							
PCB110	NA	ND	0.074	0.5	ng/wet g							
PCB114	NA	ND	0.072	0.5	ng/wet g							
PCB118	NA	ND	0.069	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g							
PCB123	NA	ND	0.018	0.5	ng/wet g							
PCB126	NA	ND	0.086	0.5	ng/wet g							
PCB128	NA	ND	0.081	0.5	ng/wet g							
PCB137	NA	ND	0.25	0.5	ng/wet g							
PCB138	NA	ND	0.057	0.5	ng/wet g							
PCB141	NA	ND	0.25	0.5	ng/wet g							
PCB149	NA	ND	0.092	0.5	ng/wet g							
PCB151	NA	ND	0.073	0.5	ng/wet g							
PCB153	NA	ND	0.065	0.5	ng/wet g							
PCB156	NA	ND	0.089	0.5	ng/wet g							
PCB157	NA	ND	0.103	0.5	ng/wet g							
PCB158	NA	ND	0.074	0.5	ng/wet g							
PCB167	NA	ND	0.049	0.5	ng/wet g							
PCB168+132	NA	ND	0.094	0.5	ng/wet g							
PCB169	NA	ND	0.116	0.5	ng/wet g							
PCB170	NA	ND	0.118	0.5	ng/wet g							
PCB174	NA	ND	0.25	0.5	ng/wet g							
PCB177	NA	ND	0.085	0.5	ng/wet g							
PCB180	NA	ND	0.154	0.5	ng/wet g							
PCB183	NA	ND	0.056	0.5	ng/wet g							
PCB187	NA	ND	0.168	0.5	ng/wet g							
PCB189	NA	ND	0.109	0.5	ng/wet g							
PCB194	NA	ND	0.164	0.5	ng/wet g							
PCB195	NA	ND	0.093	0.5	ng/wet g							
PCB199(200)	NA	ND	0.25	0.5	ng/wet g							
PCB201	NA	ND	0.104	0.5	ng/wet g							
PCB203	NA	ND	0.25	0.5	ng/wet g							
PCB206	NA	ND	0.155	0.5	ng/wet g							
PCB209	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
PCB003	NA	44.1	0.25	0.5	ng/wet g	50	0	88	50 - 150%	PASS		
PCB005	NA	45.2	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS		
PCB008	NA	51.5	0.017	0.5	ng/wet g	50	0	103	50 - 150%	PASS		
PCB015	NA	48.4	0.25	0.5	ng/wet g	50	0	97	50 - 150%	PASS		
PCB018	NA	46.4	0.029	0.5	ng/wet g	50	0	93	50 - 150%	PASS		
PCB027	NA	45.4	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS		
PCB028	NA	48.7	0.023	0.5	ng/wet g	50	0	97	50 - 150%	PASS		
PCB029	NA	46.2	0.25	0.5	ng/wet g	50	0	92	50 - 150%	PASS		
PCB031	NA	45.9	0.25	0.5	ng/wet g	50	0	92	50 - 150%	PASS		
PCB033	NA	48	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB037	NA	47.1	0.06	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB044	NA	49.4	0.028	0.5	ng/wet g	50	0	99	50 - 150%	PASS		
PCB049	NA	46.1	0.036	0.5	ng/wet g	50	0	92	50 - 150%	PASS		
PCB052	NA	48.2	0.012	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB056(060)	NA	48.1	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB066	NA	47.3	0.027	0.5	ng/wet g	50	0	95	50 - 150%	PASS		
PCB070	NA	49.4	0.023	0.5	ng/wet g	50	0	99	50 - 150%	PASS		
PCB074	NA	47.8	0.021	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB077	NA	45.9	0.018	0.5	ng/wet g	50	0	92	50 - 150%	PASS		
PCB081	NA	49.1	0.084	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB087	NA	45.4	0.081	0.5	ng/wet g	50	0	91	50 - 150%	PASS		
PCB095	NA	47.2	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB097	NA	50.1	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS		
PCB099	NA	49.2	0.028	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB101	NA	47.6	0.027	0.5	ng/wet g	50	0	95	50 - 150%	PASS		
PCB105	NA	45.9	0.047	0.5	ng/wet g	50	0	92	50 - 150%	PASS		
PCB110	NA	47.3	0.074	0.5	ng/wet g	50	0	95	50 - 150%	PASS		
PCB114	NA	48.3	0.072	0.5	ng/wet g	50	0	97	50 - 150%	PASS		
PCB118	NA	49.5	0.069	0.5	ng/wet g	50	0	99	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	45.5	0.071	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB123	NA	44.7	0.018	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB126	NA	49.7	0.086	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB128	NA	46.4	0.081	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB137	NA	49.1	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB138	NA	46	0.057	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB141	NA	44.6	0.25	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB149	NA	46.9	0.092	0.5	ng/wet g	50	0	94	50 - 150%	PASS			
PCB151	NA	49.5	0.073	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB153	NA	44.6	0.065	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB156	NA	47.5	0.089	0.5	ng/wet g	50	0	95	50 - 150%	PASS			
PCB157	NA	45.8	0.103	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB158	NA	46.1	0.074	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB167	NA	50.8	0.049	0.5	ng/wet g	50	0	102	50 - 150%	PASS			
PCB168+132	NA	93.6	0.094	0.5	ng/wet g	100	0	94	50 - 150%	PASS			
PCB169	NA	49.4	0.116	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB170	NA	45.6	0.118	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB174	NA	47.7	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS			
PCB177	NA	51.4	0.085	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB180	NA	48	0.154	0.5	ng/wet g	50	0	96	50 - 150%	PASS			
PCB183	NA	48.9	0.056	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB187	NA	45.9	0.168	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB189	NA	48.5	0.109	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB194	NA	51.9	0.164	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB195	NA	46.7	0.093	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB199(200)	NA	45.6	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB201	NA	46.4	0.104	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB203	NA	45.8	0.25	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB206	NA	44.5	0.155	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB209	NA	44.8	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 11-May-19	
PCB003	NA	44.8	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS	2	25	PASS
PCB005	NA	47.8	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	6	25	PASS
PCB008	NA	50	0.017	0.5	ng/wet g	50	0	100	50 - 150%	PASS	3	25	PASS
PCB015	NA	51.8	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS	7	25	PASS
PCB018	NA	47.4	0.029	0.5	ng/wet g	50	0	95	50 - 150%	PASS	2	25	PASS
PCB027	NA	46.5	0.25	0.5	ng/wet g	50	0	93	50 - 150%	PASS	2	25	PASS
PCB028	NA	49.8	0.023	0.5	ng/wet g	50	0	100	50 - 150%	PASS	3	25	PASS
PCB029	NA	45.3	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS	1	25	PASS
PCB031	NA	46.8	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS	2	25	PASS
PCB033	NA	48.2	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	0	25	PASS
PCB037	NA	49.3	0.06	0.5	ng/wet g	50	0	99	50 - 150%	PASS	5	25	PASS
PCB044	NA	46.8	0.028	0.5	ng/wet g	50	0	94	50 - 150%	PASS	5	25	PASS
PCB049	NA	46.7	0.036	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS
PCB052	NA	49.7	0.012	0.5	ng/wet g	50	0	99	50 - 150%	PASS	3	25	PASS
PCB056(060)	NA	49.2	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS	2	25	PASS
PCB066	NA	47.9	0.027	0.5	ng/wet g	50	0	96	50 - 150%	PASS	1	25	PASS
PCB070	NA	49.9	0.023	0.5	ng/wet g	50	0	100	50 - 150%	PASS	1	25	PASS
PCB074	NA	48.8	0.021	0.5	ng/wet g	50	0	98	50 - 150%	PASS	2	25	PASS
PCB077	NA	50.4	0.018	0.5	ng/wet g	50	0	101	50 - 150%	PASS	9	25	PASS
PCB081	NA	49	0.084	0.5	ng/wet g	50	0	98	50 - 150%	PASS	0	25	PASS
PCB087	NA	49.5	0.081	0.5	ng/wet g	50	0	99	50 - 150%	PASS	8	25	PASS
PCB095	NA	46.7	0.25	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS
PCB097	NA	48.2	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	4	25	PASS
PCB099	NA	47.2	0.028	0.5	ng/wet g	50	0	94	50 - 150%	PASS	4	25	PASS
PCB101	NA	47.8	0.027	0.5	ng/wet g	50	0	96	50 - 150%	PASS	1	25	PASS
PCB105	NA	46.3	0.047	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS
PCB110	NA	47.4	0.074	0.5	ng/wet g	50	0	95	50 - 150%	PASS	0	25	PASS
PCB114	NA	48.1	0.072	0.5	ng/wet g	50	0	96	50 - 150%	PASS	1	25	PASS
PCB118	NA	49.2	0.069	0.5	ng/wet g	50	0	98	50 - 150%	PASS	1	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	45	0.071	0.5	ng/wet g	50	0	90	50 - 150%	PASS	1	25	PASS	
PCB123	NA	47.9	0.018	0.5	ng/wet g	50	0	96	50 - 150%	PASS	8	25	PASS	
PCB126	NA	49.9	0.086	0.5	ng/wet g	50	0	100	50 - 150%	PASS	1	25	PASS	
PCB128	NA	45.1	0.081	0.5	ng/wet g	50	0	90	50 - 150%	PASS	3	25	PASS	
PCB137	NA	47	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS	4	25	PASS	
PCB138	NA	48.3	0.057	0.5	ng/wet g	50	0	97	50 - 150%	PASS	5	25	PASS	
PCB141	NA	47.2	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS	5	25	PASS	
PCB149	NA	47.2	0.092	0.5	ng/wet g	50	0	94	50 - 150%	PASS	0	25	PASS	
PCB151	NA	47.6	0.073	0.5	ng/wet g	50	0	95	50 - 150%	PASS	4	25	PASS	
PCB153	NA	48.7	0.065	0.5	ng/wet g	50	0	97	50 - 150%	PASS	9	25	PASS	
PCB156	NA	46.1	0.089	0.5	ng/wet g	50	0	92	50 - 150%	PASS	3	25	PASS	
PCB157	NA	44.9	0.103	0.5	ng/wet g	50	0	90	50 - 150%	PASS	2	25	PASS	
PCB158	NA	46.7	0.074	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS	
PCB167	NA	50.4	0.049	0.5	ng/wet g	50	0	101	50 - 150%	PASS	1	25	PASS	
PCB168+132	NA	95.7	0.094	0.5	ng/wet g	100	0	96	50 - 150%	PASS	2	25	PASS	
PCB169	NA	48.6	0.116	0.5	ng/wet g	50	0	97	50 - 150%	PASS	2	25	PASS	
PCB170	NA	49.4	0.118	0.5	ng/wet g	50	0	99	50 - 150%	PASS	8	25	PASS	
PCB174	NA	51	0.25	0.5	ng/wet g	50	0	102	50 - 150%	PASS	7	25	PASS	
PCB177	NA	44.2	0.085	0.5	ng/wet g	50	0	88	50 - 150%	PASS	16	25	PASS	
PCB180	NA	45.6	0.154	0.5	ng/wet g	50	0	91	50 - 150%	PASS	5	25	PASS	
PCB183	NA	48.9	0.056	0.5	ng/wet g	50	0	98	50 - 150%	PASS	0	25	PASS	
PCB187	NA	47.5	0.168	0.5	ng/wet g	50	0	95	50 - 150%	PASS	3	25	PASS	
PCB189	NA	47.2	0.109	0.5	ng/wet g	50	0	94	50 - 150%	PASS	3	25	PASS	
PCB194	NA	46.1	0.164	0.5	ng/wet g	50	0	92	50 - 150%	PASS	12	25	PASS	
PCB195	NA	44.7	0.093	0.5	ng/wet g	50	0	89	50 - 150%	PASS	4	25	PASS	
PCB199(200)	NA	47.6	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	4	25	PASS	
PCB201	NA	42.3	0.104	0.5	ng/wet g	50	0	85	50 - 150%	PASS	9	25	PASS	
PCB203	NA	44.5	0.25	0.5	ng/wet g	50	0	89	50 - 150%	PASS	3	25	PASS	
PCB206	NA	44.3	0.155	0.5	ng/wet g	50	0	89	50 - 150%	PASS	0	25	PASS	
PCB209	NA	44.4	0.25	0.5	ng/wet g	50	0	89	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61939-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19			Analyzed: 11-May-19		
PCB018	NA	637	0.029	0.5	ng/wet g	2.72	23419	50 - 150%	FAIL			1
PCB028	NA	20.3	0.023	0.5	ng/wet g	14.1	144	50 - 150%	PASS			
PCB031	NA	8.57	0.25	0.5	ng/wet g	10.4	82	50 - 150%	PASS			
PCB044	NA	20.6	0.028	0.5	ng/wet g	20.4	101	50 - 150%	PASS			
PCB049	NA	25.1	0.036	0.5	ng/wet g	27.3	92	50 - 150%	PASS			
PCB052	NA	36.3	0.012	0.5	ng/wet g	36.4	100	50 - 150%	PASS			
PCB056(060)	NA	23.2	0.25	0.5	ng/wet g	12.8	181	50 - 150%	FAIL			1
PCB066	NA	61.1	0.027	0.5	ng/wet g	69.4	88	50 - 150%	PASS			
PCB070	NA	51.4	0.023	0.5	ng/wet g	50	103	50 - 150%	PASS			
PCB074	NA	27.8	0.021	0.5	ng/wet g	33.7	82	50 - 150%	PASS			
PCB087	NA	30.9	0.081	0.5	ng/wet g	27.9	111	50 - 150%	PASS			
PCB095	NA	32.5	0.25	0.5	ng/wet g	33.6	97	50 - 150%	PASS			
PCB099	NA	54.4	0.028	0.5	ng/wet g	78	70	50 - 150%	PASS			
PCB101	NA	67.3	0.027	0.5	ng/wet g	90.8	74	50 - 150%	PASS			
PCB105	NA	46.7	0.047	0.5	ng/wet g	50.3	93	50 - 150%	PASS			
PCB110	NA	66.7	0.074	0.5	ng/wet g	94.6	71	50 - 150%	PASS			
PCB118	NA	81.5	0.069	0.5	ng/wet g	112	73	50 - 150%	PASS			
PCB128	NA	36.1	0.081	0.5	ng/wet g	31.6	114	50 - 150%	PASS			
PCB138	NA	220	0.057	0.5	ng/wet g	162	136	50 - 150%	PASS			
PCB149	NA	59.3	0.092	0.5	ng/wet g	67.1	88	50 - 150%	PASS			
PCB151	NA	16.7	0.073	0.5	ng/wet g	23.3	72	50 - 150%	PASS			
PCB153	NA	177	0.065	0.5	ng/wet g	201	88	50 - 150%	PASS			
PCB156	NA	12.8	0.089	0.5	ng/wet g	13.3	96	50 - 150%	PASS			
PCB157	NA	3.47	0.103	0.5	ng/wet g	4.08	85	50 - 150%	PASS			
PCB158	NA	16.4	0.074	0.5	ng/wet g	11.3	145	50 - 150%	PASS			
PCB168+132	NA	23.8	0.094	0.5	ng/wet g	20.8	114	50 - 150%	PASS			
PCB170	NA	37.6	0.118	0.5	ng/wet g	29.2	129	50 - 150%	PASS			
PCB174	NA	21.8	0.25	0.5	ng/wet g	18.6	117	50 - 150%	PASS			
PCB180	NA	62.3	0.154	0.5	ng/wet g	80.8	77	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB183	NA	28	0.056	0.5	ng/wet g	23.3		120	50 - 150%	PASS			
PCB187	NA	63.6	0.168	0.5	ng/wet g	54.8		116	50 - 150%	PASS			
PCB194	NA	13.3	0.164	0.5	ng/wet g	13.2		101	50 - 150%	PASS			
PCB195	NA	2.91	0.093	0.5	ng/wet g	4.95		59	50 - 150%	PASS			
PCB201	NA	2.75	0.104	0.5	ng/wet g	3.59		77	50 - 150%	PASS			
PCB206	NA	2.79	0.155	0.5	ng/wet g	6.24		45	50 - 150%	FAIL			1
PCB209	NA	1.19	0.25	0.5	ng/wet g	2.45		49	50 - 150%	FAIL			1

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61940-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 04-May-19		
PCB018	NA	624	0.029	0.5	ng/wet g	2.72	22941	50 - 150%	FAIL			1
PCB028	NA	18.8	0.023	0.5	ng/wet g	14.1	133	50 - 150%	PASS			
PCB031	NA	9.91	0.25	0.5	ng/wet g	10.4	95	50 - 150%	PASS			
PCB044	NA	21.8	0.028	0.5	ng/wet g	20.4	107	50 - 150%	PASS			
PCB049	NA	28.8	0.036	0.5	ng/wet g	27.3	105	50 - 150%	PASS			
PCB052	NA	39.9	0.012	0.5	ng/wet g	36.4	110	50 - 150%	PASS			
PCB056(060)	NA	48.3	0.25	0.5	ng/wet g	12.8	377	50 - 150%	FAIL			1
PCB066	NA	70.4	0.027	0.5	ng/wet g	69.4	101	50 - 150%	PASS			
PCB070	NA	55.2	0.023	0.5	ng/wet g	50	110	50 - 150%	PASS			
PCB074	NA	33.6	0.021	0.5	ng/wet g	33.7	100	50 - 150%	PASS			
PCB087	NA	30.3	0.081	0.5	ng/wet g	27.9	109	50 - 150%	PASS			
PCB095	NA	35.7	0.25	0.5	ng/wet g	33.6	106	50 - 150%	PASS			
PCB099	NA	51.3	0.028	0.5	ng/wet g	78	66	50 - 150%	PASS			
PCB101	NA	65.6	0.027	0.5	ng/wet g	90.8	72	50 - 150%	PASS			
PCB105	NA	49.6	0.047	0.5	ng/wet g	50.3	99	50 - 150%	PASS			
PCB110	NA	66.2	0.074	0.5	ng/wet g	94.6	70	50 - 150%	PASS			
PCB118	NA	81.2	0.069	0.5	ng/wet g	112	72	50 - 150%	PASS			
PCB128	NA	43.8	0.081	0.5	ng/wet g	31.6	139	50 - 150%	PASS			
PCB138	NA	202	0.057	0.5	ng/wet g	162	125	50 - 150%	PASS			
PCB149	NA	49.5	0.092	0.5	ng/wet g	67.1	74	50 - 150%	PASS			
PCB151	NA	14.7	0.073	0.5	ng/wet g	23.3	63	50 - 150%	PASS			
PCB153	NA	192	0.065	0.5	ng/wet g	201	96	50 - 150%	PASS			
PCB156	NA	14.2	0.089	0.5	ng/wet g	13.3	107	50 - 150%	PASS			
PCB157	NA	2.92	0.103	0.5	ng/wet g	4.08	72	50 - 150%	PASS			
PCB158	NA	18.5	0.074	0.5	ng/wet g	11.3	164	50 - 150%	FAIL			1
PCB168+132	NA	16.9	0.094	0.5	ng/wet g	20.8	81	50 - 150%	PASS			
PCB170	NA	39	0.118	0.5	ng/wet g	29.2	134	50 - 150%	PASS			
PCB174	NA	22.6	0.25	0.5	ng/wet g	18.6	122	50 - 150%	PASS			
PCB180	NA	76	0.154	0.5	ng/wet g	80.8	94	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB183	NA	24.2	0.056	0.5	ng/wet g	23.3		104	50 - 150%	PASS			
PCB187	NA	69.7	0.168	0.5	ng/wet g	54.8		127	50 - 150%	PASS			
PCB194	NA	10.9	0.164	0.5	ng/wet g	13.2		83	50 - 150%	PASS			
PCB195	NA	4.31	0.093	0.5	ng/wet g	4.95		87	50 - 150%	PASS			
PCB201	NA	4.41	0.104	0.5	ng/wet g	3.59		123	50 - 150%	PASS			
PCB206	NA	1.89	0.155	0.5	ng/wet g	6.24		30	50 - 150%	FAIL			1
PCB209	NA	0.101	0.25	0.5	ng/wet g	2.45		4	50 - 150%	FAIL			1

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61946-MS1	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**					**Received: 20-Feb-19**	
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19					Analyzed: 04-May-19	
PCB003	NA	11.6	0.25	0.5	ng/wet g	9.62	0	121	50 - 150%	PASS			
PCB005	NA	9.09	0.25	0.5	ng/wet g	9.62	0	94	50 - 150%	PASS			
PCB008	NA	10.7	0.017	0.5	ng/wet g	9.62	0	111	50 - 150%	PASS			
PCB015	NA	11.1	0.25	0.5	ng/wet g	9.62	0	115	50 - 150%	PASS			
PCB018	NA	18.5	0.029	0.5	ng/wet g	9.62	0	192	50 - 150%	FAIL			1
PCB027	NA	10.1	0.25	0.5	ng/wet g	9.62	0	105	50 - 150%	PASS			
PCB028	NA	12.1	0.023	0.5	ng/wet g	9.62	0	126	50 - 150%	PASS			
PCB029	NA	10.7	0.25	0.5	ng/wet g	9.62	0	111	50 - 150%	PASS			
PCB031	NA	9.08	0.25	0.5	ng/wet g	9.62	0	94	50 - 150%	PASS			
PCB033	NA	10.9	0.25	0.5	ng/wet g	9.62	0	113	50 - 150%	PASS			
PCB037	NA	11.1	0.06	0.5	ng/wet g	9.62	0	115	50 - 150%	PASS			
PCB044	NA	10.1	0.028	0.5	ng/wet g	9.62	0	105	50 - 150%	PASS			
PCB049	NA	10.7	0.036	0.5	ng/wet g	9.62	0.511	106	50 - 150%	PASS			
PCB052	NA	9.8	0.012	0.5	ng/wet g	9.62	0.57	96	50 - 150%	PASS			
PCB056(060)	NA	8.53	0.25	0.5	ng/wet g	9.62	0	89	50 - 150%	PASS			
PCB066	NA	11.3	0.027	0.5	ng/wet g	9.62	0	117	50 - 150%	PASS			
PCB070	NA	11	0.023	0.5	ng/wet g	9.62	0	114	50 - 150%	PASS			
PCB074	NA	10.3	0.021	0.5	ng/wet g	9.62	0	107	50 - 150%	PASS			
PCB077	NA	9.93	0.018	0.5	ng/wet g	9.62	0	103	50 - 150%	PASS			
PCB081	NA	10.2	0.084	0.5	ng/wet g	9.62	0	106	50 - 150%	PASS			
PCB087	NA	9.69	0.081	0.5	ng/wet g	9.62	0.687	94	50 - 150%	PASS			
PCB095	NA	10.6	0.25	0.5	ng/wet g	9.62	0.515	105	50 - 150%	PASS			
PCB097	NA	11	0.25	0.5	ng/wet g	9.62	0	114	50 - 150%	PASS			
PCB099	NA	9.02	0.028	0.5	ng/wet g	9.62	1.68	76	50 - 150%	PASS			
PCB101	NA	10.1	0.027	0.5	ng/wet g	9.62	1.51	89	50 - 150%	PASS			
PCB105	NA	10.2	0.047	0.5	ng/wet g	9.62	0	106	50 - 150%	PASS			
PCB110	NA	10	0.074	0.5	ng/wet g	9.62	0.769	96	50 - 150%	PASS			
PCB114	NA	8	0.072	0.5	ng/wet g	9.62	0	83	50 - 150%	PASS			
PCB118	NA	11.8	0.069	0.5	ng/wet g	9.62	1.58	106	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	7.71	0.071	0.5	ng/wet g	9.62	0	80	50 - 150%	PASS			
PCB123	NA	8.46	0.018	0.5	ng/wet g	9.62	0	88	50 - 150%	PASS			
PCB126	NA	9.65	0.086	0.5	ng/wet g	9.62	0	100	50 - 150%	PASS			
PCB128	NA	9.52	0.081	0.5	ng/wet g	9.62	0	99	50 - 150%	PASS			
PCB137	NA	10.2	0.25	0.5	ng/wet g	9.62	0	106	50 - 150%	PASS			
PCB138	NA	11.8	0.057	0.5	ng/wet g	9.62	3.7	84	50 - 150%	PASS			
PCB141	NA	9.14	0.25	0.5	ng/wet g	9.62	0	95	50 - 150%	PASS			
PCB149	NA	10.2	0.092	0.5	ng/wet g	9.62	1.18	94	50 - 150%	PASS			
PCB151	NA	11	0.073	0.5	ng/wet g	9.62	0.307	111	50 - 150%	PASS			
PCB153	NA	12	0.065	0.5	ng/wet g	9.62	4.27	80	50 - 150%	PASS			
PCB156	NA	8.87	0.089	0.5	ng/wet g	9.62	0	92	50 - 150%	PASS			
PCB157	NA	6.99	0.103	0.5	ng/wet g	9.62	0	73	50 - 150%	PASS			
PCB158	NA	12.3	0.074	0.5	ng/wet g	9.62	0.472	123	50 - 150%	PASS			
PCB167	NA	10.5	0.049	0.5	ng/wet g	9.62	0	109	50 - 150%	PASS			
PCB168+132	NA	21.9	0.094	0.5	ng/wet g	19.2	0	114	50 - 150%	PASS			
PCB169	NA	7.42	0.116	0.5	ng/wet g	9.62	0	77	50 - 150%	PASS			
PCB170	NA	7.37	0.118	0.5	ng/wet g	9.62	0	77	50 - 150%	PASS			
PCB174	NA	9.79	0.25	0.5	ng/wet g	9.62	0	102	50 - 150%	PASS			
PCB177	NA	8.05	0.085	0.5	ng/wet g	9.62	0	84	50 - 150%	PASS			
PCB180	NA	9.06	0.154	0.5	ng/wet g	9.62	0.836	85	50 - 150%	PASS			
PCB183	NA	9.89	0.056	0.5	ng/wet g	9.62	0.261	100	50 - 150%	PASS			
PCB187	NA	11.4	0.168	0.5	ng/wet g	9.62	1.27	105	50 - 150%	PASS			
PCB189	NA	5.67	0.109	0.5	ng/wet g	9.62	0	59	50 - 150%	PASS			
PCB194	NA	6.26	0.164	0.5	ng/wet g	9.62	0	65	50 - 150%	PASS			
PCB195	NA	6.53	0.093	0.5	ng/wet g	9.62	0	68	50 - 150%	PASS			
PCB199(200)	NA	7.09	0.25	0.5	ng/wet g	9.62	0	74	50 - 150%	PASS			
PCB201	NA	6.91	0.104	0.5	ng/wet g	9.62	0	72	50 - 150%	PASS			
PCB203	NA	6.61	0.25	0.5	ng/wet g	9.62	0	69	50 - 150%	PASS			
PCB206	NA	4.86	0.155	0.5	ng/wet g	9.62	0	51	50 - 150%	PASS			
PCB209	NA	3.89	0.25	0.5	ng/wet g	9.62	0	40	50 - 150%	FAIL			1,Q

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61946-MS2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**				**Received: 20-Feb-19**			
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19			
PCB003	NA	11.5	0.25	0.5	ng/wet g	9.46	0	122	50 - 150%	PASS	1	25	PASS	
PCB005	NA	8.51	0.25	0.5	ng/wet g	9.46	0	90	50 - 150%	PASS	4	25	PASS	
PCB008	NA	11.1	0.017	0.5	ng/wet g	9.46	0	117	50 - 150%	PASS	5	25	PASS	
PCB015	NA	10.4	0.25	0.5	ng/wet g	9.46	0	110	50 - 150%	PASS	4	25	PASS	
PCB018	NA	19.4	0.029	0.5	ng/wet g	9.46	0	205	50 - 150%	FAIL	7	25	PASS	1
PCB027	NA	10.4	0.25	0.5	ng/wet g	9.46	0	110	50 - 150%	PASS	5	25	PASS	
PCB028	NA	11.1	0.023	0.5	ng/wet g	9.46	0	117	50 - 150%	PASS	7	25	PASS	
PCB029	NA	10.8	0.25	0.5	ng/wet g	9.46	0	114	50 - 150%	PASS	3	25	PASS	
PCB031	NA	9.98	0.25	0.5	ng/wet g	9.46	0	105	50 - 150%	PASS	11	25	PASS	
PCB033	NA	11.3	0.25	0.5	ng/wet g	9.46	0	119	50 - 150%	PASS	5	25	PASS	
PCB037	NA	10.5	0.06	0.5	ng/wet g	9.46	0	111	50 - 150%	PASS	4	25	PASS	
PCB044	NA	10.2	0.028	0.5	ng/wet g	9.46	0	108	50 - 150%	PASS	3	25	PASS	
PCB049	NA	9.62	0.036	0.5	ng/wet g	9.46	0.511	96	50 - 150%	PASS	10	25	PASS	
PCB052	NA	9.89	0.012	0.5	ng/wet g	9.46	0.57	99	50 - 150%	PASS	3	25	PASS	
PCB056(060)	NA	7.63	0.25	0.5	ng/wet g	9.46	0	81	50 - 150%	PASS	9	25	PASS	
PCB066	NA	10.9	0.027	0.5	ng/wet g	9.46	0	115	50 - 150%	PASS	2	25	PASS	
PCB070	NA	10.9	0.023	0.5	ng/wet g	9.46	0	115	50 - 150%	PASS	1	25	PASS	
PCB074	NA	9.82	0.021	0.5	ng/wet g	9.46	0	104	50 - 150%	PASS	3	25	PASS	
PCB077	NA	9.38	0.018	0.5	ng/wet g	9.46	0	99	50 - 150%	PASS	4	25	PASS	
PCB081	NA	9.86	0.084	0.5	ng/wet g	9.46	0	104	50 - 150%	PASS	2	25	PASS	
PCB087	NA	9.3	0.081	0.5	ng/wet g	9.46	0.687	91	50 - 150%	PASS	3	25	PASS	
PCB095	NA	10.7	0.25	0.5	ng/wet g	9.46	0.515	108	50 - 150%	PASS	3	25	PASS	
PCB097	NA	10.2	0.25	0.5	ng/wet g	9.46	0	108	50 - 150%	PASS	5	25	PASS	
PCB099	NA	9.73	0.028	0.5	ng/wet g	9.46	1.68	85	50 - 150%	PASS	11	25	PASS	
PCB101	NA	9.73	0.027	0.5	ng/wet g	9.46	1.51	87	50 - 150%	PASS	2	25	PASS	
PCB105	NA	9.65	0.047	0.5	ng/wet g	9.46	0	102	50 - 150%	PASS	4	25	PASS	
PCB110	NA	9.46	0.074	0.5	ng/wet g	9.46	0.769	92	50 - 150%	PASS	4	25	PASS	
PCB114	NA	7.63	0.072	0.5	ng/wet g	9.46	0	81	50 - 150%	PASS	2	25	PASS	
PCB118	NA	11.1	0.069	0.5	ng/wet g	9.46	1.58	101	50 - 150%	PASS	5	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	8.53	0.071	0.5	ng/wet g	9.46	0	90	50 - 150%	PASS	12	25	PASS	
PCB123	NA	11	0.018	0.5	ng/wet g	9.46	0	116	50 - 150%	PASS	27	25	FAIL	Q
PCB126	NA	9.64	0.086	0.5	ng/wet g	9.46	0	102	50 - 150%	PASS	2	25	PASS	
PCB128	NA	9.23	0.081	0.5	ng/wet g	9.46	0	98	50 - 150%	PASS	1	25	PASS	
PCB137	NA	11	0.25	0.5	ng/wet g	9.46	0	116	50 - 150%	PASS	9	25	PASS	
PCB138	NA	11.9	0.057	0.5	ng/wet g	9.46	3.7	87	50 - 150%	PASS	4	25	PASS	
PCB141	NA	10.1	0.25	0.5	ng/wet g	9.46	0	107	50 - 150%	PASS	12	25	PASS	
PCB149	NA	9.81	0.092	0.5	ng/wet g	9.46	1.18	91	50 - 150%	PASS	3	25	PASS	
PCB151	NA	9.76	0.073	0.5	ng/wet g	9.46	0.307	100	50 - 150%	PASS	10	25	PASS	
PCB153	NA	14.5	0.065	0.5	ng/wet g	9.46	4.27	108	50 - 150%	PASS	30	25	FAIL	Q,NH
PCB156	NA	7.83	0.089	0.5	ng/wet g	9.46	0	83	50 - 150%	PASS	10	25	PASS	
PCB157	NA	6.52	0.103	0.5	ng/wet g	9.46	0	69	50 - 150%	PASS	6	25	PASS	
PCB158	NA	10.6	0.074	0.5	ng/wet g	9.46	0.472	107	50 - 150%	PASS	14	25	PASS	
PCB167	NA	10.3	0.049	0.5	ng/wet g	9.46	0	109	50 - 150%	PASS	0	25	PASS	
PCB168+132	NA	19.7	0.094	0.5	ng/wet g	18.9	0	104	50 - 150%	PASS	9	25	PASS	
PCB169	NA	7	0.116	0.5	ng/wet g	9.46	0	74	50 - 150%	PASS	4	25	PASS	
PCB170	NA	7.36	0.118	0.5	ng/wet g	9.46	0	78	50 - 150%	PASS	1	25	PASS	
PCB174	NA	10.5	0.25	0.5	ng/wet g	9.46	0	111	50 - 150%	PASS	8	25	PASS	
PCB177	NA	8.42	0.085	0.5	ng/wet g	9.46	0	89	50 - 150%	PASS	6	25	PASS	
PCB180	NA	8.2	0.154	0.5	ng/wet g	9.46	0.836	78	50 - 150%	PASS	9	25	PASS	
PCB183	NA	9.8	0.056	0.5	ng/wet g	9.46	0.261	101	50 - 150%	PASS	1	25	PASS	
PCB187	NA	11.6	0.168	0.5	ng/wet g	9.46	1.27	109	50 - 150%	PASS	4	25	PASS	
PCB189	NA	5.6	0.109	0.5	ng/wet g	9.46	0	59	50 - 150%	PASS	0	25	PASS	
PCB194	NA	6.14	0.164	0.5	ng/wet g	9.46	0	65	50 - 150%	PASS	0	25	PASS	
PCB195	NA	6.58	0.093	0.5	ng/wet g	9.46	0	70	50 - 150%	PASS	3	25	PASS	
PCB199(200)	NA	6.8	0.25	0.5	ng/wet g	9.46	0	72	50 - 150%	PASS	3	25	PASS	
PCB201	NA	6.75	0.104	0.5	ng/wet g	9.46	0	71	50 - 150%	PASS	1	25	PASS	
PCB203	NA	5.86	0.25	0.5	ng/wet g	9.46	0	62	50 - 150%	PASS	11	25	PASS	
PCB206	NA	5.27	0.155	0.5	ng/wet g	9.46	0	56	50 - 150%	PASS	9	25	PASS	
PCB209	NA	4.22	0.25	0.5	ng/wet g	9.46	0	45	50 - 150%	FAIL	12	25	PASS	1,Q

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61946-R2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 05-May-19		
PCB003	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB005	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB008	NA	ND	0.017	0.5	ng/wet g					0	25 PASS	
PCB015	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB018	NA	ND	0.029	0.5	ng/wet g					0	25 PASS	
PCB027	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB028	NA	ND	0.023	0.5	ng/wet g					0	25 PASS	
PCB029	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB031	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB033	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB037	NA	ND	0.06	0.5	ng/wet g					0	25 PASS	
PCB044	NA	ND	0.028	0.5	ng/wet g					0	25 PASS	
PCB049	NA	0.421	0.036	0.5	ng/wet g					35	25 FAIL	J,SL
PCB052	NA	0.485	0.012	0.5	ng/wet g					30	25 FAIL	J,SL
PCB056(060)	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB066	NA	ND	0.027	0.5	ng/wet g					0	25 PASS	
PCB070	NA	ND	0.023	0.5	ng/wet g					0	25 PASS	
PCB074	NA	ND	0.021	0.5	ng/wet g					0	25 PASS	
PCB077	NA	ND	0.018	0.5	ng/wet g					0	25 PASS	
PCB081	NA	ND	0.084	0.5	ng/wet g					0	25 PASS	
PCB087	NA	0.683	0.081	0.5	ng/wet g					1	25 PASS	
PCB095	NA	0.498	0.25	0.5	ng/wet g					7	25 PASS	J
PCB097	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB099	NA	1.42	0.028	0.5	ng/wet g					30	25 FAIL	NH
PCB101	NA	1.28	0.027	0.5	ng/wet g					30	25 FAIL	NH
PCB105	NA	ND	0.047	0.5	ng/wet g					0	25 PASS	
PCB110	NA	0.637	0.074	0.5	ng/wet g					34	25 FAIL	NH
PCB114	NA	ND	0.072	0.5	ng/wet g					0	25 PASS	
PCB118	NA	1.37	0.069	0.5	ng/wet g					27	25 FAIL	NH

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g					0	25	PASS	
PCB123	NA	ND	0.018	0.5	ng/wet g					0	25	PASS	
PCB126	NA	ND	0.086	0.5	ng/wet g					0	25	PASS	
PCB128	NA	ND	0.081	0.5	ng/wet g					0	25	PASS	
PCB137	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB138	NA	3.55	0.057	0.5	ng/wet g					8	25	PASS	
PCB141	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB149	NA	1.17	0.092	0.5	ng/wet g					2	25	PASS	
PCB151	NA	0.201	0.073	0.5	ng/wet g					69	25	FAIL	J,SL
PCB153	NA	3.67	0.065	0.5	ng/wet g					28	25	FAIL	NH
PCB156	NA	ND	0.089	0.5	ng/wet g					0	25	PASS	
PCB157	NA	ND	0.103	0.5	ng/wet g					0	25	PASS	
PCB158	NA	0.478	0.074	0.5	ng/wet g					3	25	PASS	J
PCB167	NA	ND	0.049	0.5	ng/wet g					0	25	PASS	
PCB168+132	NA	ND	0.094	0.5	ng/wet g					0	25	PASS	
PCB169	NA	ND	0.116	0.5	ng/wet g					0	25	PASS	
PCB170	NA	ND	0.118	0.5	ng/wet g					0	25	PASS	
PCB174	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB177	NA	ND	0.085	0.5	ng/wet g					0	25	PASS	
PCB180	NA	0.778	0.154	0.5	ng/wet g					14	25	PASS	
PCB183	NA	0.19	0.056	0.5	ng/wet g					55	25	FAIL	J,SL
PCB187	NA	1.16	0.168	0.5	ng/wet g					18	25	PASS	
PCB189	NA	ND	0.109	0.5	ng/wet g					0	25	PASS	
PCB194	NA	ND	0.164	0.5	ng/wet g					0	25	PASS	
PCB195	NA	ND	0.093	0.5	ng/wet g					0	25	PASS	
PCB199(200)	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB201	NA	ND	0.104	0.5	ng/wet g					0	25	PASS	
PCB203	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB206	NA	ND	0.155	0.5	ng/wet g					0	25	PASS	
PCB209	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 01-May-19	
(DFPBDE)	NA	106			% Recovery	100	106	54 - 146%	PASS			
(FTBDE)	NA	103			% Recovery	100	103	33 - 131%	PASS			
PBDE017	NA	ND	0.05	0.1	ng/wet g							
PBDE028	NA	ND	0.05	0.1	ng/wet g							
PBDE047	NA	ND	0.05	0.1	ng/wet g							
PBDE049	NA	ND	0.05	0.1	ng/wet g							
PBDE066	NA	ND	0.05	0.1	ng/wet g							
PBDE085	NA	ND	0.05	0.1	ng/wet g							
PBDE099	NA	ND	0.05	0.1	ng/wet g							
PBDE100	NA	ND	0.05	0.1	ng/wet g							
PBDE138	NA	ND	0.05	0.1	ng/wet g							
PBDE153	NA	ND	0.05	0.1	ng/wet g							
PBDE154	NA	ND	0.05	0.1	ng/wet g							
PBDE183	NA	ND	0.05	0.1	ng/wet g							
PBDE209	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 01-May-19	
(DFPBDE)	NA	104			% Recovery	100	0	104	54 - 146%	PASS		
(FTBDE)	NA	103			% Recovery	100	0	103	33 - 131%	PASS		
PBDE017	NA	52.4	0.05	0.1	ng/wet g	50	0	105	50 - 150%	PASS		
PBDE028	NA	50.3	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS		
PBDE047	NA	49	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS		
PBDE049	NA	57.9	0.05	0.1	ng/wet g	50	0	116	50 - 150%	PASS		
PBDE066	NA	50.5	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS		
PBDE085	NA	45.6	0.05	0.1	ng/wet g	50	0	91	50 - 150%	PASS		
PBDE099	NA	49.5	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS		
PBDE100	NA	46.5	0.05	0.1	ng/wet g	50	0	93	50 - 150%	PASS		
PBDE138	NA	40.7	0.05	0.1	ng/wet g	50	0	81	50 - 150%	PASS		
PBDE153	NA	40.8	0.05	0.1	ng/wet g	50	0	82	50 - 150%	PASS		
PBDE154	NA	46.3	0.05	0.1	ng/wet g	50	0	93	50 - 150%	PASS		
PBDE183	NA	40.1	0.05	0.1	ng/wet g	50	0	80	50 - 150%	PASS		
PBDE209	NA	178	1	5	ng/wet g	250	0	71	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21062		Prepared: 24-Apr-19					Analyzed: 02-May-19	
(DFPBDE)	NA	105			% Recovery	100	0	105	54 - 146%	PASS	1	30	PASS
(FTBDE)	NA	106			% Recovery	100	0	106	33 - 131%	PASS	3	30	PASS
PBDE017	NA	51.5	0.05	0.1	ng/wet g	50	0	103	50 - 150%	PASS	2	25	PASS
PBDE028	NA	52	0.05	0.1	ng/wet g	50	0	104	50 - 150%	PASS	3	25	PASS
PBDE047	NA	50.1	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS	2	25	PASS
PBDE049	NA	49.5	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	16	25	PASS
PBDE066	NA	51.1	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS	1	25	PASS
PBDE085	NA	53.9	0.05	0.1	ng/wet g	50	0	108	50 - 150%	PASS	17	25	PASS
PBDE099	NA	52.7	0.05	0.1	ng/wet g	50	0	105	50 - 150%	PASS	6	25	PASS
PBDE100	NA	51.8	0.05	0.1	ng/wet g	50	0	104	50 - 150%	PASS	11	25	PASS
PBDE138	NA	55.5	0.05	0.1	ng/wet g	50	0	111	50 - 150%	PASS	31	25	FAIL
PBDE153	NA	51	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS	22	25	PASS
PBDE154	NA	53.9	0.05	0.1	ng/wet g	50	0	108	50 - 150%	PASS	15	25	PASS
PBDE183	NA	57.1	0.05	0.1	ng/wet g	50	0	114	50 - 150%	PASS	35	25	FAIL
PBDE209	NA	322	1	5	ng/wet g	250	0	129	50 - 150%	PASS	58	25	FAIL

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 03-May-19	
(DFPBDE)	NA	100			% Recovery	100	100	54 - 146%	PASS			
(FTBDE)	NA	99			% Recovery	100	99	33 - 131%	PASS			
PBDE017	NA	ND	0.05	0.1	ng/wet g							
PBDE028	NA	ND	0.05	0.1	ng/wet g							
PBDE047	NA	ND	0.05	0.1	ng/wet g							
PBDE049	NA	ND	0.05	0.1	ng/wet g							
PBDE066	NA	ND	0.05	0.1	ng/wet g							
PBDE085	NA	ND	0.05	0.1	ng/wet g							
PBDE099	NA	ND	0.05	0.1	ng/wet g							
PBDE100	NA	ND	0.05	0.1	ng/wet g							
PBDE138	NA	ND	0.05	0.1	ng/wet g							
PBDE153	NA	ND	0.05	0.1	ng/wet g							
PBDE154	NA	ND	0.05	0.1	ng/wet g							
PBDE183	NA	ND	0.05	0.1	ng/wet g							
PBDE209	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 03-May-19	
(DFPBDE)	NA	97			% Recovery	100	0	97	54 - 146%	PASS		
(FTBDE)	NA	95			% Recovery	100	0	95	33 - 131%	PASS		
PBDE017	NA	50.6	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS		
PBDE028	NA	52.2	0.05	0.1	ng/wet g	50	0	104	50 - 150%	PASS		
PBDE047	NA	48.9	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS		
PBDE049	NA	47.1	0.05	0.1	ng/wet g	50	0	94	50 - 150%	PASS		
PBDE066	NA	52.8	0.05	0.1	ng/wet g	50	0	106	50 - 150%	PASS		
PBDE085	NA	46.3	0.05	0.1	ng/wet g	50	0	93	50 - 150%	PASS		
PBDE099	NA	44.3	0.05	0.1	ng/wet g	50	0	89	50 - 150%	PASS		
PBDE100	NA	48.9	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS		
PBDE138	NA	49.8	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS		
PBDE153	NA	43.2	0.05	0.1	ng/wet g	50	0	86	50 - 150%	PASS		
PBDE154	NA	45.5	0.05	0.1	ng/wet g	50	0	91	50 - 150%	PASS		
PBDE183	NA	50.6	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS		
PBDE209	NA	176	1	5	ng/wet g	250	0	70	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61935-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
	Method: EPA 8270D-NCI				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 03-May-19		
(DFPBDE)	NA	103			% Recovery	100	0	103	54 - 146%	PASS	6	30	PASS	
(FTBDE)	NA	96			% Recovery	100	0	96	33 - 131%	PASS	1	30	PASS	
PBDE017	NA	50.9	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS	1	25	PASS	
PBDE028	NA	49	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS	6	25	PASS	
PBDE047	NA	48.6	0.05	0.1	ng/wet g	50	0	97	50 - 150%	PASS	1	25	PASS	
PBDE049	NA	46.1	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	2	25	PASS	
PBDE066	NA	50.2	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS	6	25	PASS	
PBDE085	NA	47.8	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS	3	25	PASS	
PBDE099	NA	45.2	0.05	0.1	ng/wet g	50	0	90	50 - 150%	PASS	1	25	PASS	
PBDE100	NA	49.3	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	1	25	PASS	
PBDE138	NA	47.9	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS	4	25	PASS	
PBDE153	NA	46	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	7	25	PASS	
PBDE154	NA	45.8	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	1	25	PASS	
PBDE183	NA	53.7	0.05	0.1	ng/wet g	50	0	107	50 - 150%	PASS	6	25	PASS	
PBDE209	NA	269	1	5	ng/wet g	250	0	108	50 - 150%	PASS	43	25	FAIL	
Sample ID: 61939-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**			**Sampled:**				**Received:**		
	Method: EPA 8270D-NCI				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 03-May-19		
(DFPBDE)	NA	49			% Recovery	100		49	60 - 140%	FAIL				
(FTBDE)	NA	163			% Recovery	100		163	60 - 140%	FAIL				
PBDE028	NA	2	0.05	0.1	ng/wet g	2.26		88	50 - 150%	PASS				
PBDE047	NA	51.5	0.05	0.1	ng/wet g	73.3		70	50 - 150%	PASS				
PBDE049	NA	3.04	0.05	0.1	ng/wet g	4.01		76	50 - 150%	PASS				
PBDE066	NA	2.47	0.05	0.1	ng/wet g	1.85		134	50 - 150%	PASS				
PBDE099	NA	10.9	0.05	0.1	ng/wet g	19.2		57	50 - 150%	PASS				
PBDE100	NA	8.63	0.05	0.1	ng/wet g	17.1		50	50 - 150%	PASS				
PBDE153	NA	1.33	0.05	0.1	ng/wet g	3.83		35	50 - 150%	FAIL				1
PBDE154	NA	4.02	0.05	0.1	ng/wet g	6.88		58	50 - 150%	PASS				

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61940-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D-NCI				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 02-May-19		
(DFPBDE)	NA	97			% Recovery	100		97	60 - 140%	PASS		
(FTBDE)	NA	161			% Recovery	100		161	60 - 140%	FAIL		
PBDE028	NA	1.93	0.05	0.1	ng/wet g	2.26		85	50 - 150%	PASS		
PBDE047	NA	76.7	0.05	0.1	ng/wet g	73.3		105	50 - 150%	PASS		
PBDE049	NA	4.8	0.05	0.1	ng/wet g	4.01		120	50 - 150%	PASS		
PBDE066	NA	2.55	0.05	0.1	ng/wet g	1.85		138	50 - 150%	PASS		
PBDE099	NA	20.5	0.05	0.1	ng/wet g	19.2		107	50 - 150%	PASS		
PBDE100	NA	17.2	0.05	0.1	ng/wet g	17.1		101	50 - 150%	PASS		
PBDE153	NA	4.25	0.05	0.1	ng/wet g	3.83		111	50 - 150%	PASS		
PBDE154	NA	9.76	0.05	0.1	ng/wet g	6.88		142	50 - 150%	PASS		
Sample ID: 61946-MS1	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
	Method: EPA 8270D-NCI				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 02-May-19		
(DFPBDE)	NA	55			% Recovery	100	0	55	53 - 141%	PASS		
(FTBDE)	NA	137			% Recovery	100	0	137	61 - 132%	FAIL		
PBDE017	NA	11.4	0.05	0.1	ng/wet g	9.62	0	119	50 - 150%	PASS		
PBDE028	NA	9.92	0.05	0.1	ng/wet g	9.62	0	103	50 - 150%	PASS		
PBDE047	NA	7.59	0.05	0.1	ng/wet g	9.62	1.39	64	50 - 150%	PASS		
PBDE049	NA	7.11	0.05	0.1	ng/wet g	9.62	0.157	72	50 - 150%	PASS		
PBDE066	NA	6.43	0.05	0.1	ng/wet g	9.62	0	67	50 - 150%	PASS		
PBDE085	NA	4.45	0.05	0.1	ng/wet g	9.62	0	46	50 - 150%	FAIL		Q,M
PBDE099	NA	4.59	0.05	0.1	ng/wet g	9.62	0.337	44	50 - 150%	FAIL		Q,M
PBDE100	NA	5.32	0.05	0.1	ng/wet g	9.62	0.262	53	50 - 150%	PASS		
PBDE138	NA	4.07	0.05	0.1	ng/wet g	9.62	0	42	50 - 150%	FAIL		Q,M
PBDE153	NA	3.74	0.05	0.1	ng/wet g	9.62	0	39	50 - 150%	FAIL		Q,M
PBDE154	NA	4.25	0.05	0.1	ng/wet g	9.62	0	44	50 - 150%	FAIL		Q,M
PBDE183	NA	3.94	0.05	0.1	ng/wet g	9.62	0	41	50 - 150%	FAIL		Q,M
PBDE209	NA	27.4	1	5	ng/wet g	48.1	0	57	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61946-MS2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**			**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
	Method: EPA 8270D-NCI				Batch ID: O-21062			Prepared: 24-Apr-19				Analyzed: 02-May-19		
(DFPBDE)	NA	51			% Recovery	100	0	51	53 - 141%	FAIL	8	30	PASS	
(FTBDE)	NA	134			% Recovery	100	0	134	61 - 132%	FAIL	2	30	PASS	
PBDE017	NA	11.1	0.05	0.1	ng/wet g	9.46	0	117	50 - 150%	PASS	2	25	PASS	
PBDE028	NA	9.84	0.05	0.1	ng/wet g	9.46	0	104	50 - 150%	PASS	1	25	PASS	
PBDE047	NA	7.83	0.05	0.1	ng/wet g	9.46	1.39	68	50 - 150%	PASS	6	25	PASS	
PBDE049	NA	7.04	0.05	0.1	ng/wet g	9.46	0.157	73	50 - 150%	PASS	1	25	PASS	
PBDE066	NA	6	0.05	0.1	ng/wet g	9.46	0	63	50 - 150%	PASS	6	25	PASS	
PBDE085	NA	3.96	0.05	0.1	ng/wet g	9.46	0	42	50 - 150%	FAIL	9	25	PASS	Q,M
PBDE099	NA	4.21	0.05	0.1	ng/wet g	9.46	0.337	41	50 - 150%	FAIL	7	25	PASS	Q,M
PBDE100	NA	4.43	0.05	0.1	ng/wet g	9.46	0.262	44	50 - 150%	FAIL	19	25	PASS	Q,M
PBDE138	NA	3.05	0.05	0.1	ng/wet g	9.46	0	32	50 - 150%	FAIL	27	25	FAIL	Q,M
PBDE153	NA	3.06	0.05	0.1	ng/wet g	9.46	0	32	50 - 150%	FAIL	20	25	PASS	Q,M
PBDE154	NA	3.76	0.05	0.1	ng/wet g	9.46	0	40	50 - 150%	FAIL	10	25	PASS	Q,M
PBDE183	NA	3.55	0.05	0.1	ng/wet g	9.46	0	38	50 - 150%	FAIL	8	25	PASS	Q,M
PBDE209	NA	27	1	5	ng/wet g	47.3	0	57	50 - 150%	PASS	0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61946-R2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
	Method: EPA 8270D-NCI				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 02-May-19		
(DFPBDE)	NA	58			% Recovery	100	58	53 - 141%	PASS	15	30	PASS	
(FTBDE)	NA	127			% Recovery	100	127	61 - 132%	PASS	6	30	PASS	
PBDE017	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE028	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE047	NA	1.34	0.05	0.1	ng/wet g					7	25	PASS	
PBDE049	NA	0.157	0.05	0.1	ng/wet g					0	25	PASS	
PBDE066	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE085	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE099	NA	0.366	0.05	0.1	ng/wet g					17	25	PASS	
PBDE100	NA	0.271	0.05	0.1	ng/wet g					7	25	PASS	
PBDE138	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE153	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE154	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE183	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE209	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19	
(d10-Acenaphthene)	NA	79			% Recovery	100	79	27 - 133%	PASS			
(d10-Phenanthrene)	NA	92			% Recovery	100	92	43 - 129%	PASS			
(d12-Chrysene)	NA	98			% Recovery	100	98	62 - 131%	PASS			
(d12-Perylene)	NA	93			% Recovery	100	93	50 - 150%	PASS			
(d8-Naphthalene)	NA	63			% Recovery	100	63	5 - 139%	PASS			
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylphenanthrene	NA	ND	1	5	ng/wet g							
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g							
2-Methylnaphthalene	NA	ND	1	5	ng/wet g							
Acenaphthene	NA	ND	1	5	ng/wet g							
Acenaphthylene	NA	ND	1	5	ng/wet g							
Anthracene	NA	ND	1	5	ng/wet g							
Benz[a]anthracene	NA	ND	1	5	ng/wet g							
Benzo[a]pyrene	NA	ND	1	5	ng/wet g							
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g							
Benzo[e]pyrene	NA	ND	1	5	ng/wet g							
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g							
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g							
Biphenyl	NA	ND	1	5	ng/wet g							
Chrysene	NA	ND	1	5	ng/wet g							
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g							
Dibenzothiophene	NA	ND	1	5	ng/wet g							
Fluoranthene	NA	ND	1	5	ng/wet g							
Fluorene	NA	ND	1	5	ng/wet g							
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g							
Naphthalene	NA	ND	1	5	ng/wet g							
Perylene	NA	ND	1	5	ng/wet g							
Phenanthrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 04-May-19		
(d10-Acenaphthene)	NA	72			% Recovery	100	0	72	27 - 133%	PASS		
(d10-Phenanthrene)	NA	86			% Recovery	100	0	86	43 - 129%	PASS		
(d12-Chrysene)	NA	94			% Recovery	100	0	94	62 - 131%	PASS		
(d12-Perylene)	NA	90			% Recovery	100	0	90	50 - 150%	PASS		
(d8-Naphthalene)	NA	45			% Recovery	100	0	45	5 - 139%	PASS		
1,6,7-Trimethylnaphthalene	NA	454	1	5	ng/wet g	500	0	91	50 - 150%	PASS		
1-Methylnaphthalene	NA	301	1	5	ng/wet g	500	0	60	50 - 150%	PASS		
1-Methylphenanthrene	NA	571	1	5	ng/wet g	500	0	114	50 - 150%	PASS		
2,6-Dimethylnaphthalene	NA	382	1	5	ng/wet g	500	0	76	50 - 150%	PASS		
2-Methylnaphthalene	NA	309	1	5	ng/wet g	500	0	62	50 - 150%	PASS		
Acenaphthene	NA	385	1	5	ng/wet g	500	0	77	50 - 150%	PASS		
Acenaphthylene	NA	392	1	5	ng/wet g	500	0	78	50 - 150%	PASS		
Anthracene	NA	476	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
Benz[a]anthracene	NA	576	1	5	ng/wet g	500	0	115	50 - 150%	PASS		
Benzo[a]pyrene	NA	499	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Benzo[b]fluoranthene	NA	543	1	5	ng/wet g	500	0	109	50 - 150%	PASS		
Benzo[e]pyrene	NA	521	1	5	ng/wet g	500	0	104	50 - 150%	PASS		
Benzo[g,h,i]perylene	NA	498	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Benzo[k]fluoranthene	NA	514	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Biphenyl	NA	345	1	5	ng/wet g	500	0	69	50 - 150%	PASS		
Chrysene	NA	491	1	5	ng/wet g	500	0	98	50 - 150%	PASS		
Dibenz[a,h]anthracene	NA	544	1	5	ng/wet g	500	0	109	50 - 150%	PASS		
Dibenzothiophene	NA	496	1	5	ng/wet g	500	0	99	50 - 150%	PASS		
Fluoranthene	NA	558	1	5	ng/wet g	500	0	112	50 - 150%	PASS		
Fluorene	NA	463	1	5	ng/wet g	500	0	93	50 - 150%	PASS		
Indeno[1,2,3-cd]pyrene	NA	557	1	5	ng/wet g	500	0	111	50 - 150%	PASS		
Naphthalene	NA	244	1	5	ng/wet g	500	0	49	50 - 150%	FAIL		1,Q
Perylene	NA	499	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Phenanthrene	NA	510	1	5	ng/wet g	500	0	102	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	553	1	5	ng/wet g	500	0	111	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61934-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19					Analyzed: 04-May-19		
(d10-Acenaphthene)	NA	79			% Recovery	100	0	79	27 - 133%	PASS	9	30	PASS	
(d10-Phenanthrene)	NA	82			% Recovery	100	0	82	43 - 129%	PASS	5	30	PASS	
(d12-Chrysene)	NA	90			% Recovery	100	0	90	62 - 131%	PASS	4	30	PASS	
(d12-Perylene)	NA	88			% Recovery	100	0	88	50 - 150%	PASS	2	30	PASS	
(d8-Naphthalene)	NA	71			% Recovery	100	0	71	5 - 139%	PASS	45	30	FAIL	
1,6,7-Trimethylnaphthalene	NA	440	1	5	ng/wet g	500	0	88	50 - 150%	PASS	3	25	PASS	
1-Methylnaphthalene	NA	401	1	5	ng/wet g	500	0	80	50 - 150%	PASS	29	25	FAIL	Q
1-Methylphenanthrene	NA	558	1	5	ng/wet g	500	0	112	50 - 150%	PASS	2	25	PASS	
2,6-Dimethylnaphthalene	NA	451	1	5	ng/wet g	500	0	90	50 - 150%	PASS	17	25	PASS	
2-Methylnaphthalene	NA	425	1	5	ng/wet g	500	0	85	50 - 150%	PASS	31	25	FAIL	
Acenaphthene	NA	431	1	5	ng/wet g	500	0	86	50 - 150%	PASS	11	25	PASS	
Acenaphthylene	NA	463	1	5	ng/wet g	500	0	93	50 - 150%	PASS	18	25	PASS	
Anthracene	NA	469	1	5	ng/wet g	500	0	94	50 - 150%	PASS	1	25	PASS	
Benz[a]anthracene	NA	556	1	5	ng/wet g	500	0	111	50 - 150%	PASS	4	25	PASS	
Benzo[a]pyrene	NA	492	1	5	ng/wet g	500	0	98	50 - 150%	PASS	2	25	PASS	
Benzo[b]fluoranthene	NA	535	1	5	ng/wet g	500	0	107	50 - 150%	PASS	2	25	PASS	
Benzo[e]pyrene	NA	511	1	5	ng/wet g	500	0	102	50 - 150%	PASS	2	25	PASS	
Benzo[g,h,i]perylene	NA	492	1	5	ng/wet g	500	0	98	50 - 150%	PASS	2	25	PASS	
Benzo[k]fluoranthene	NA	510	1	5	ng/wet g	500	0	102	50 - 150%	PASS	1	25	PASS	
Biphenyl	NA	413	1	5	ng/wet g	500	0	83	50 - 150%	PASS	18	25	PASS	
Chrysene	NA	470	1	5	ng/wet g	500	0	94	50 - 150%	PASS	4	25	PASS	
Dibenz[a,h]anthracene	NA	544	1	5	ng/wet g	500	0	109	50 - 150%	PASS	0	25	PASS	
Dibenzothiophene	NA	477	1	5	ng/wet g	500	0	95	50 - 150%	PASS	4	25	PASS	
Fluoranthene	NA	546	1	5	ng/wet g	500	0	109	50 - 150%	PASS	3	25	PASS	
Fluorene	NA	458	1	5	ng/wet g	500	0	92	50 - 150%	PASS	1	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	553	1	5	ng/wet g	500	0	111	50 - 150%	PASS	0	25	PASS	
Naphthalene	NA	387	1	5	ng/wet g	500	0	77	50 - 150%	PASS	44	25	FAIL	
Perylene	NA	483	1	5	ng/wet g	500	0	97	50 - 150%	PASS	3	25	PASS	
Phenanthrene	NA	492	1	5	ng/wet g	500	0	98	50 - 150%	PASS	4	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	546	1	5	ng/wet g	500	0	109	50 - 150%	PASS	2	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	91			% Recovery	100	91	27 - 133%	PASS			
(d10-Phenanthrene)	NA	105			% Recovery	100	105	43 - 129%	PASS			
(d12-Chrysene)	NA	116			% Recovery	100	116	62 - 131%	PASS			
(d12-Perylene)	NA	105			% Recovery	100	105	50 - 150%	PASS			
(d8-Naphthalene)	NA	68			% Recovery	100	68	5 - 139%	PASS			
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylphenanthrene	NA	ND	1	5	ng/wet g							
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g							
2-Methylnaphthalene	NA	ND	1	5	ng/wet g							
Acenaphthene	NA	ND	1	5	ng/wet g							
Acenaphthylene	NA	ND	1	5	ng/wet g							
Anthracene	NA	ND	1	5	ng/wet g							
Benz[a]anthracene	NA	ND	1	5	ng/wet g							
Benzo[a]pyrene	NA	ND	1	5	ng/wet g							
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g							
Benzo[e]pyrene	NA	ND	1	5	ng/wet g							
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g							
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g							
Biphenyl	NA	ND	1	5	ng/wet g							
Chrysene	NA	ND	1	5	ng/wet g							
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g							
Dibenzothiophene	NA	ND	1	5	ng/wet g							
Fluoranthene	NA	ND	1	5	ng/wet g							
Fluorene	NA	ND	1	5	ng/wet g							
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g							
Naphthalene	NA	ND	1	5	ng/wet g							
Perylene	NA	ND	1	5	ng/wet g							
Phenanthrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	93			% Recovery	100	0	93	27 - 133%	PASS		
(d10-Phenanthrene)	NA	101			% Recovery	100	0	101	43 - 129%	PASS		
(d12-Chrysene)	NA	109			% Recovery	100	0	109	62 - 131%	PASS		
(d12-Perylene)	NA	103			% Recovery	100	0	103	50 - 150%	PASS		
(d8-Naphthalene)	NA	77			% Recovery	100	0	77	5 - 139%	PASS		
1,6,7-Trimethylnaphthalene	NA	474	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
1-Methylnaphthalene	NA	414	1	5	ng/wet g	500	0	83	50 - 150%	PASS		
1-Methylphenanthrene	NA	524	1	5	ng/wet g	500	0	105	50 - 150%	PASS		
2,6-Dimethylnaphthalene	NA	449	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
2-Methylnaphthalene	NA	434	1	5	ng/wet g	500	0	87	50 - 150%	PASS		
Acenaphthene	NA	452	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
Acenaphthylene	NA	448	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
Anthracene	NA	489	1	5	ng/wet g	500	0	98	50 - 150%	PASS		
Benz[a]anthracene	NA	533	1	5	ng/wet g	500	0	107	50 - 150%	PASS		
Benzo[a]pyrene	NA	506	1	5	ng/wet g	500	0	101	50 - 150%	PASS		
Benzo[b]fluoranthene	NA	515	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Benzo[e]pyrene	NA	513	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Benzo[g,h,i]perylene	NA	509	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Benzo[k]fluoranthene	NA	520	1	5	ng/wet g	500	0	104	50 - 150%	PASS		
Biphenyl	NA	423	1	5	ng/wet g	500	0	85	50 - 150%	PASS		
Chrysene	NA	517	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Dibenz[a,h]anthracene	NA	512	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Dibenzothiophene	NA	500	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Fluoranthene	NA	512	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Fluorene	NA	483	1	5	ng/wet g	500	0	97	50 - 150%	PASS		
Indeno[1,2,3-cd]pyrene	NA	511	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Naphthalene	NA	402	1	5	ng/wet g	500	0	80	50 - 150%	PASS		
Perylene	NA	489	1	5	ng/wet g	500	0	98	50 - 150%	PASS		
Phenanthrene	NA	519	1	5	ng/wet g	500	0	104	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	508	1	5	ng/wet g	500	0	102	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61935-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	87			% Recovery	100	0	87	27 - 133%	PASS	7	30 PASS	
(d10-Phenanthrene)	NA	103			% Recovery	100	0	103	43 - 129%	PASS	2	30 PASS	
(d12-Chrysene)	NA	111			% Recovery	100	0	111	62 - 131%	PASS	2	30 PASS	
(d12-Perylene)	NA	104			% Recovery	100	0	104	50 - 150%	PASS	1	30 PASS	
(d8-Naphthalene)	NA	54			% Recovery	100	0	54	5 - 139%	PASS	35	30 FAIL	
1,6,7-Trimethylnaphthalene	NA	450	1	5	ng/wet g	500	0	90	50 - 150%	PASS	5	25 PASS	
1-Methylnaphthalene	NA	334	1	5	ng/wet g	500	0	67	50 - 150%	PASS	21	25 PASS	
1-Methylphenanthrene	NA	526	1	5	ng/wet g	500	0	105	50 - 150%	PASS	0	25 PASS	
2,6-Dimethylnaphthalene	NA	399	1	5	ng/wet g	500	0	80	50 - 150%	PASS	12	25 PASS	
2-Methylnaphthalene	NA	341	1	5	ng/wet g	500	0	68	50 - 150%	PASS	25	25 PASS	
Acenaphthene	NA	407	1	5	ng/wet g	500	0	81	50 - 150%	PASS	11	25 PASS	
Acenaphthylene	NA	399	1	5	ng/wet g	500	0	80	50 - 150%	PASS	12	25 PASS	
Anthracene	NA	476	1	5	ng/wet g	500	0	95	50 - 150%	PASS	3	25 PASS	
Benz[a]anthracene	NA	540	1	5	ng/wet g	500	0	108	50 - 150%	PASS	1	25 PASS	
Benzo[a]pyrene	NA	503	1	5	ng/wet g	500	0	101	50 - 150%	PASS	0	25 PASS	
Benzo[b]fluoranthene	NA	517	1	5	ng/wet g	500	0	103	50 - 150%	PASS	0	25 PASS	
Benzo[e]pyrene	NA	516	1	5	ng/wet g	500	0	103	50 - 150%	PASS	0	25 PASS	
Benzo[g,h,i]perylene	NA	505	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25 PASS	
Benzo[k]fluoranthene	NA	513	1	5	ng/wet g	500	0	103	50 - 150%	PASS	1	25 PASS	
Biphenyl	NA	368	1	5	ng/wet g	500	0	74	50 - 150%	PASS	14	25 PASS	
Chrysene	NA	521	1	5	ng/wet g	500	0	104	50 - 150%	PASS	1	25 PASS	
Dibenz[a,h]anthracene	NA	513	1	5	ng/wet g	500	0	103	50 - 150%	PASS	1	25 PASS	
Dibenzothiophene	NA	489	1	5	ng/wet g	500	0	98	50 - 150%	PASS	2	25 PASS	
Fluoranthene	NA	512	1	5	ng/wet g	500	0	102	50 - 150%	PASS	0	25 PASS	
Fluorene	NA	456	1	5	ng/wet g	500	0	91	50 - 150%	PASS	6	25 PASS	
Indeno[1,2,3-cd]pyrene	NA	510	1	5	ng/wet g	500	0	102	50 - 150%	PASS	0	25 PASS	
Naphthalene	NA	278	1	5	ng/wet g	500	0	56	50 - 150%	PASS	35	25 FAIL	
Perylene	NA	492	1	5	ng/wet g	500	0	98	50 - 150%	PASS	0	25 PASS	
Phenanthrene	NA	504	1	5	ng/wet g	500	0	101	50 - 150%	PASS	3	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	507	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61946-MS1	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19			Analyzed: 04-May-19		
(d10-Acenaphthene)	NA	93			% Recovery	100	0	93	34 - 143% PASS			
(d10-Phenanthrene)	NA	92			% Recovery	100	0	92	48 - 134% PASS			
(d12-Chrysene)	NA	233			% Recovery	100	0	233	31 - 134% FAIL			
(d12-Perylene)	NA	90			% Recovery	100	0	90	50 - 150% PASS			
(d8-Naphthalene)	NA	74			% Recovery	100	0	74	13 - 135% PASS			
1,6,7-Trimethylnaphthalene	NA	98.5	1	5	ng/wet g	96.2	0	102	50 - 150% PASS			
1-Methylnaphthalene	NA	82.5	1	5	ng/wet g	96.2	0	86	50 - 150% PASS			
1-Methylphenanthrene	NA	98.8	1	5	ng/wet g	96.2	0	103	50 - 150% PASS			
2,6-Dimethylnaphthalene	NA	94.6	1	5	ng/wet g	96.2	0	98	50 - 150% PASS			
2-Methylnaphthalene	NA	91.6	1	5	ng/wet g	96.2	0	95	50 - 150% PASS			
Acenaphthene	NA	91.2	1	5	ng/wet g	96.2	0	95	50 - 150% PASS			
Acenaphthylene	NA	96.9	1	5	ng/wet g	96.2	0	101	50 - 150% PASS			
Anthracene	NA	93	1	5	ng/wet g	96.2	0	97	50 - 150% PASS			
Benz[a]anthracene	NA	323	1	5	ng/wet g	96.2	0	336	50 - 150% FAIL			1
Benzo[a]pyrene	NA	95	1	5	ng/wet g	96.2	0	99	50 - 150% PASS			
Benzo[b]fluoranthene	NA	100	1	5	ng/wet g	96.2	0	104	50 - 150% PASS			
Benzo[e]pyrene	NA	98	1	5	ng/wet g	96.2	0	102	50 - 150% PASS			
Benzo[g,h,i]perylene	NA	99.2	1	5	ng/wet g	96.2	0	103	50 - 150% PASS			
Benzo[k]fluoranthene	NA	121	1	5	ng/wet g	96.2	0	126	50 - 150% PASS			
Biphenyl	NA	85.1	1	5	ng/wet g	96.2	0	88	50 - 150% PASS			
Chrysene	NA	217	1	5	ng/wet g	96.2	0	226	50 - 150% FAIL			1
Dibenz[a,h]anthracene	NA	110	1	5	ng/wet g	96.2	0	114	50 - 150% PASS			
Dibenzothiophene	NA	90.9	1	5	ng/wet g	96.2	0	94	50 - 150% PASS			
Fluoranthene	NA	97.3	1	5	ng/wet g	96.2	0	101	50 - 150% PASS			
Fluorene	NA	103	1	5	ng/wet g	96.2	0	107	50 - 150% PASS			
Indeno[1,2,3-cd]pyrene	NA	106	1	5	ng/wet g	96.2	0	110	50 - 150% PASS			
Naphthalene	NA	78.5	1	5	ng/wet g	96.2	0	82	50 - 150% PASS			
Perylene	NA	88.1	1	5	ng/wet g	96.2	0	92	50 - 150% PASS			
Phenanthrene	NA	102	1	5	ng/wet g	96.2	0	106	50 - 150% PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	78.7	1	5	ng/wet g	96.2	0	82	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 61946-MS2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**				**Received: 20-Feb-19**			
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 04-May-19			
(d10-Acenaphthene)	NA	98			% Recovery	100	0	98	34 - 143%	PASS	5	30	PASS	
(d10-Phenanthrene)	NA	93			% Recovery	100	0	93	48 - 134%	PASS	1	30	PASS	
(d12-Chrysene)	NA	222			% Recovery	100	0	222	31 - 134%	FAIL	5	30	PASS	
(d12-Perylene)	NA	89			% Recovery	100	0	89	50 - 150%	PASS	1	30	PASS	
(d8-Naphthalene)	NA	84			% Recovery	100	0	84	13 - 135%	PASS	13	30	PASS	
1,6,7-Trimethylnaphthalene	NA	104	1	5	ng/wet g	94.6	0	110	50 - 150%	PASS	8	25	PASS	
1-Methylnaphthalene	NA	89.4	1	5	ng/wet g	94.6	0	95	50 - 150%	PASS	10	25	PASS	
1-Methylphenanthrene	NA	64.3	1	5	ng/wet g	94.6	0	68	50 - 150%	PASS	41	25	FAIL	
2,6-Dimethylnaphthalene	NA	100	1	5	ng/wet g	94.6	0	106	50 - 150%	PASS	8	25	PASS	
2-Methylnaphthalene	NA	97.9	1	5	ng/wet g	94.6	0	103	50 - 150%	PASS	8	25	PASS	
Acenaphthene	NA	93.6	1	5	ng/wet g	94.6	0	99	50 - 150%	PASS	4	25	PASS	
Acenaphthylene	NA	102	1	5	ng/wet g	94.6	0	108	50 - 150%	PASS	7	25	PASS	
Anthracene	NA	93.6	1	5	ng/wet g	94.6	0	99	50 - 150%	PASS	2	25	PASS	
Benz[a]anthracene	NA	321	1	5	ng/wet g	94.6	0	339	50 - 150%	FAIL	1	25	PASS	1
Benzo[a]pyrene	NA	96.2	1	5	ng/wet g	94.6	0	102	50 - 150%	PASS	3	25	PASS	
Benzo[b]fluoranthene	NA	107	1	5	ng/wet g	94.6	0	113	50 - 150%	PASS	8	25	PASS	
Benzo[e]pyrene	NA	98	1	5	ng/wet g	94.6	0	104	50 - 150%	PASS	2	25	PASS	
Benzo[g,h,i]perylene	NA	99.4	1	5	ng/wet g	94.6	0	105	50 - 150%	PASS	2	25	PASS	
Benzo[k]fluoranthene	NA	117	1	5	ng/wet g	94.6	0	124	50 - 150%	PASS	2	25	PASS	
Biphenyl	NA	90.3	1	5	ng/wet g	94.6	0	95	50 - 150%	PASS	8	25	PASS	
Chrysene	NA	207	1	5	ng/wet g	94.6	0	219	50 - 150%	FAIL	3	25	PASS	1
Dibenz[a,h]anthracene	NA	111	1	5	ng/wet g	94.6	0	117	50 - 150%	PASS	3	25	PASS	
Dibenzothiophene	NA	91.8	1	5	ng/wet g	94.6	0	97	50 - 150%	PASS	3	25	PASS	
Fluoranthene	NA	95.6	1	5	ng/wet g	94.6	0	101	50 - 150%	PASS	0	25	PASS	
Fluorene	NA	105	1	5	ng/wet g	94.6	0	111	50 - 150%	PASS	4	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	107	1	5	ng/wet g	94.6	0	113	50 - 150%	PASS	3	25	PASS	
Naphthalene	NA	87.1	1	5	ng/wet g	94.6	0	92	50 - 150%	PASS	11	25	PASS	
Perylene	NA	92.8	1	5	ng/wet g	94.6	0	98	50 - 150%	PASS	6	25	PASS	
Phenanthrene	NA	105	1	5	ng/wet g	94.6	0	111	50 - 150%	PASS	5	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	77.4	1	5	ng/wet g	94.6	0	82	50 - 150%	PASS	0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61946-R2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**				**Received: 20-Feb-19**		
	Method: EPA 8270D				Batch ID: O-21062		Prepared: 24-Apr-19				Analyzed: 05-May-19		
(d10-Acenaphthene)	NA	95			% Recovery	100	95	34 - 143%	PASS	5	30	PASS	
(d10-Phenanthrene)	NA	92			% Recovery	100	92	48 - 134%	PASS	2	30	PASS	
(d12-Chrysene)	NA	213			% Recovery	100	213	31 - 134%	FAIL	1	30	PASS	
(d12-Perylene)	NA	88			% Recovery	100	88	50 - 150%	PASS	0	30	PASS	
(d8-Naphthalene)	NA	80			% Recovery	100	80	13 - 135%	PASS	8	30	PASS	
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylphenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
2-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benz[a]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[a]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[e]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Biphenyl	NA	ND	1	5	ng/wet g					0	25	PASS	
Chrysene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenzothiophene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluorene	NA	ND	1	5	ng/wet g					0	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Naphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Phenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g					0	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Total Extractable Organics — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 61934-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: Gravimetric				Batch ID: C-27098		Prepared: 26-Apr-19			Analyzed: 26-Apr-19		
Percent Lipids	NA	ND	0.01	0.05	% wet weight							
Sample ID: 61935-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: Gravimetric				Batch ID: C-27099		Prepared: 30-Apr-19			Analyzed: 30-Apr-19		
Percent Lipids	NA	ND	0.01	0.05	% wet weight							
Sample ID: 61939-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: Gravimetric				Batch ID: C-27098		Prepared: 26-Apr-19			Analyzed: 26-Apr-19		
Percent Lipids	NA	11.1	0.01	0.05	% wet weight	10.4		107	62 - 137% PASS			
Sample ID: 61940-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: Gravimetric				Batch ID: C-27099		Prepared: 30-Apr-19			Analyzed: 30-Apr-19		
Percent Lipids	NA	10.4	0.01	0.05	% wet weight	10.4		100	62 - 137% PASS			
Sample ID: 61946-R2	**C1_912035DNBBOG18KPB Kelp Bass**				**Matrix: Tissue**		**Sampled: 05-Feb-19**			**Received: 20-Feb-19**		
	Method: Gravimetric				Batch ID: C-27098		Prepared: 26-Apr-19			Analyzed: 26-Apr-19		
Percent Lipids	NA	0.82	0.01	0.05	% wet weight					40	25 FAIL	NH

CHAIN OF CUSTODY

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 2-5-19 Page 1 of 3

RHMP

Sample Collection By: _____ Project Name: Bight 18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
C1_9011ODANABOGI8WCR	2-5-19		Fish tissue		2	White Croaker	Metals / PCBs CHCs
C2_	:		:		:	:	✓ : ✓
C3_	:		:		:	:	✓ : ✓
C1_9020[illegible]NHBOGI8YFC	:		:		:	Yellowfin Croaker	✓ : ✓
C2_	:		:		:	:	✓ : ✓
C1_91203SDNBBOGI8KPB	:		:		:	Kelp Bass	✓ : ✓
C2_	:		:		:	:	✓ : ✓
C3_	:		:		:	:	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 2/20-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 2/20/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. ROHR	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company)		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 2-5-19 Page 2 of 3

RHMP

Sample Collection By:			Project Name: Bight 18				Project Number:	
Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis	
C1-9120SDNBBOGT18PCM	2-5-19		Fish tissue		2	Pacific Club Mackerel	✓ Metals/PCBs	CHCs ✓
C2-	"		"		"	"	✓	✓
C3-	"		"		"	"	✓	✓
C1-9120SDNBBOGT18SSB	"		"		"	Spotted Sand Bass	✓	✓
C2-	"		"		"	"	✓	✓
C3-	"		"		"	"	✓	✓
C1-9120SDSBBOGT18SSB	"		"		"	"	✓	✓
C2-	"		"		"	"	✓	✓
C3-	"		"		"	"	✓	✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 2-2019	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 11:20a.	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 2/20/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. GAKER	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company)		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 2/11/19 Page 3 of 3

RHMP

Sample Collection By: _____ Project Name: Bight 18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
C1_9060GMICABOG18CAC	2-11-19		Fish tissue		1	California Corbina	Metals / PCBs CHCs
C1_9060GMISSBOG18WHS	"		"		"	White Surfperch	✓ " "
C2_ "	"		"		2	"	✓ " ✓
C1_9060GMISSBOG18BLS	"		"		1	Black Surfperch	✓ " "
C1_9060GMISSBOG18BSH	"		"		1	Brown Smoothhound	✓ " "
C1_902080CNHBOG18SFC	"		"		1	Spotfin Croaker	" " ✓
C1_9011ODANABOG18PCM	"		"		2	Pacific Chub Mackerel	✓ " ✓
C1_91203SDNBBOG18SHS	"		"		1	Shiner	✓ " "

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 2-20-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 11:20a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 2/22/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. GOLDER	(Time) 11:20 a	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company)		(Company)		(Company)	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Physis Project ID
1807003-020

Sample Receipt Summary

Client: Wood Environment & Infrastructure Solutions, Inc Date Received: 2/20/2019 Received By: MB Inspected By: RGH

Courier:	Cooler:	Temperature:
☑ Physis ☐ FEDEX ☐ UPS ☐ Client	☑ Cooler ☐ Box Total #: 1	☐ BLUE ☐ WET ☐ DRY
Start End ☐ Other:	☐ Other :	☑ None -4.1°C

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out.....Yes
2. All sample containers arrived intact.....Yes
3. All samples listed on COC(s) are present.....Yes
4. Information on containers consistent with information on COC(s).....Yes
5. Correct containers and volume for all analyses indicated.....Yes
6. All samples received within method holding time.....Yes
7. Correct preservation used for all analyses indicated.....Yes
8. Name of sampler included on COC(s).....No

Notes:

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

June 14, 2019

Chris Stransky
Wood Environment & Infrastructure Solutions, Inc.
9210 Sky Park Court
Suite 200
San Diego, CA 92123-

Project Name: 2018 Regional Harbor monitoring Program
Physis Project ID: 1807003-021

Dear Chris,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 3/13/2019. A total of 51 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

Elements
Trace Selenium by EPA 6020
Trace Mercury by EPA 245.7
Organics
Polynuclear Aromatic Hydrocarbons by EPA 8270D
Percent Solids by SM 2540 B
Percent Lipids by Gravimetric
PBDE Congeners by EPA 8270D-NCI
Organochlorine Pesticides & PCB Congeners by EPA 8270D

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,

Rich Gossett
714 602-5320
Extension 201
richgossett@physislabs.com

PROJECT SAMPLE LIST

Wood Environment & Infrastructure Solutions, Inc. PHYSIS Project ID: 1807003-021

2018 Regional Harbor monitoring Program Total Samples: 51

PHYSIS ID	Sample ID	Description	Date	Time	Matrix
62357	C1_91202SDSBBOG18BKC	Black Croaker	3/6/2019		Tissue
62358	C1_91202SDSBBOG18RSR	Round Sting Ray	3/6/2019		Tissue
62359	C2_91202SDSBBOG18RSR	Round Sting Ray	3/6/2019		Tissue
62360	C1_91202SDSBBOG18YFC	Yellowfin Croaker	3/6/2019		Tissue
62361	C1_91202SDSBBOG18NAC	Northern Anchovy	3/6/2019		Tissue
62362	C2_91202SDSBBOG18NAC	Northern Anchovy	3/6/2019		Tissue
62363	C1_91202SDSBBOG18PCM	Pacific Chub Mackerel	3/6/2019		Tissue
62364	C1_91202SDSBBOG18SAC	Slough Anchovy	3/6/2019		Tissue
62365	C2_91202SDSBBOG18SAC	Slough Anchovy	3/6/2019		Tissue
62366	C3_91202SDSBBOG18SAC	Slough Anchovy	3/6/2019		Tissue
62367	C1_91202SDSBBOG18LPS	Leopard Shark	3/6/2019		Tissue
62368	C1_91203SDNBBOG18LPS	Leopard Shark	3/6/2019		Tissue
62369	C1_91203SDNBBOG18BKC	Black Croaker	3/6/2019		Tissue
62370	C1_91203SDNBBOG18BLS	Black Surfperch	3/6/2019		Tissue
62371	C1_91203SDNBBOG18BSB	Barred Sand Bass	3/6/2019		Tissue
62372	C2_91203SDNBBOG18BSB	Barred Sand Bass	3/6/2019		Tissue
62373	C1_91203SDNBBOG18NAC	North Anchovy	3/6/2019		Tissue
62374	C2_91203SDNBBOG18NAC	North Anchovy	3/6/2019		Tissue
62375	C1_91203SDNBBOG18RSR	Round Sting Ray	3/6/2019		Tissue
62376	C2_91203SDNBBOG18RSR	Round Sting Ray	3/6/2019		Tissue
62377	C1_91203SDNBBOG18QEF	Queen fish	3/6/2019		Tissue
62378	C2_91203SDNBBOG18QEF	Queen fish	3/6/2019		Tissue
62379	C3_91203SDNBBOG18QEF	Queen fish	3/6/2019		Tissue
62380	C1_91203SDNBBOG18SAC	Slough Anchovy	3/6/2019		Tissue
62381	C1_90606MISSBOG18SSB	Spotted San Bass	3/6/2019		Tissue
62382	C2_90606MISSBOG18SSB	Spotted San Bass	3/6/2019		Tissue
62383	C3_90606MISSBOG18SSB	Spotted San Bass	3/6/2019		Tissue
62384	C1_90606MISSBOG18RSR	Round Sting Ray	3/6/2019		Tissue
62385	C1_90606MISSBOG18SEL	Salema	3/6/2019		Tissue
62386	C1_90606MISSBOG18SHS	Shiner Surf Pearch	3/6/2019		Tissue
62387	C1_90606MISSBOG18YFC	Yellowfin Croaker	3/6/2019		Tissue
62388	C2_90606MISSBOG18YFC	Yellowfin Croaker	3/6/2019		Tissue
62389	C3_90606MISSBOG18YFC	Yellowfin Croaker	3/6/2019		Tissue
62390	C1_90208OCNHBOG18BSB	Barred San Bass	3/6/2019		Tissue
62391	C2_90208OCNHBOG18BSB	Barred San Bass	3/6/2019		Tissue

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

Wood Environment & Infrastructure Solutions, Inc. PHYSIS Project ID: 1807003-021

2018 Regional Harbor monitoring Program Total Samples: 51

PHYSIS ID	Sample ID	Description	Date	Time	Matrix
62392	C3_90208OCNHBOG18BSB	Barred San Bass	3/6/2019		Tissue
62393	C2_90208OCNHBOG18SFC	Spotfin Croaker	3/6/2019		Tissue
62394	C3_90208OCNHBOG18SFC	Spotfin Croaker	3/6/2019		Tissue
62395	C1_90208OCNHBOG18SHS	Shiner Surf Perch	3/6/2019		Tissue
62396	C1_90208OCNHBOG18CAH	California Halibut	3/6/2019		Tissue
62397	C1_90208OCNHBOG18SSB	Spotted Sand Bass	3/6/2019		Tissue
62398	C2_90208OCNHBOG18SSB	Spotted Sand Bass	3/6/2019		Tissue
62399	C3_90208OCNHBOG18SSB	Spotted Sand Bass	3/6/2019		Tissue
62400	C1_90208OCNHBOG18WHS	White Surf Perch	3/6/2019		Tissue
62401	C1_90110DANABOG18BLS	Black Surf Perch	3/6/2019		Tissue
62402	C1_90110DANABOG18BSB	Barred Sand Bass	3/6/2019		Tissue
62403	C1_90110DANABOG18SHS	Shiner Surf Perch	3/6/2019		Tissue
62404	C1_90110DANABOG18SSB	Spotted Sand Bass	3/6/2019		Tissue
62405	C1_90110DANABOG18WHS	White Surf Perch	3/6/2019		Tissue
62406	DUP-C2_91203SDNBBOG18BSB	Rep 2	3/6/2019		Tissue
62407	DUP-C1_91203SDNBBOG18NAC	Rep 2	3/6/2019		Tissue

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

ABBREVIATIONS and ACRONYMS

QM	Quality Manual
QA	Quality Assurance
QC	Quality Control
MDL	method detection limit
RL	reporting limit
R1	project sample
R2	project sample replicate
MS1	matrix spike
MS2	matrix spike replicate
B1	procedural blank
B2	procedural blank replicate
BS1	blank spike
BS2	blank spike replicate
LCS1	laboratory control spike
LCS2	laboratory control spike replicate
LCM1	laboratory control material
LCM2	laboratory control material replicate
CRM1	certified reference material
CRM2	certified reference material replicate
RPD	relative percent difference
LMW	low molecular weight
HMW	high molecular weight

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS1/MS2, BS1/BS2, LCS1/LCS2, LCM1/LCM2, CRM1/CRM2, surrogate spikes and/or replicate project sample analysis (R1/R2) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

PHYSIS QUALIFIER CODES

CODE	DEFINITION
#	see Case Narrative
ND	analyte not detected at or above the MDL
B	analyte was detected in the procedural blank greater than 10 times the MDL
E	analyte concentration exceeds the upper limit of the linear calibration range, reported value is estimated
H	sample received and/or analyzed past the recommended holding time
J	analyte was detected at a concentration below the RL and above the MDL, reported value is estimated
N	insufficient sample, analysis could not be performed
M	analyte was outside the specified accuracy and/or precision acceptance limits due to matrix interference. The associated B/BS were within limits, therefore the sample data was reported without further clarification
SH	analyte concentration in the project sample exceeded the spike concentration, therefore accuracy and/or precision acceptance limits do not apply
SL	analyte results were lower than 10 times the MDL, therefore accuracy and/or precision acceptance limits do not apply
NH	project sample was heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices, therefore accuracy and/or precision acceptance limits do not apply
Q	analyte was outside the specified QAPP acceptance limits for precision and/or accuracy but within Physis derived acceptance limits, therefore the sample data was reported without further clarification
R	Physis' QM allows for 5% of the target compounds greater than 10 times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and does not indicate any significant problems with the analysis of these project samples

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

CASE NARRATIVE

QUALIFIER NOTES

In addition to the use of analyte specific Physis Qualifier Codes where applicable, the following were also noted.

CERTIFIED REFERENCE MATERIAL

1 The QA Manual Tables 6-2 and 6-3, specifies that spike recoveries and CRM results should be within ±50% of the certified value ≥70% of the analytes.

ANALYTICAL REPORT

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	79			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	81			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	95			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.36	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round Sting R**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	94			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	111			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	ND	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	101			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	82			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	84			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	ND	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	102			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	84			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	82			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.27	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	112			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	69			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	123			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	12.2	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.653	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.496	0.179	0.5	NA	J	O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.994	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	1.31	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	103			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	107			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	73			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	117			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	7.93	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.707	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.418	0.179	0.5	NA	J	O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.84	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.858	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	89			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	89			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	80			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	86			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.59	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	100			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	93			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	82			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	110			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	8.81	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.243	0.187	0.5	NA	J	O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.613	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.76	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	96			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	88			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	73			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	104			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	8.7	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.32	0.187	0.5	NA	J	O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.706	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.786	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	98			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	94			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	75			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	8.78	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.358	0.187	0.5	NA	J	O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.782	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.795	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard Shark**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(PCB112)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	12-May-19
(PCB198)	EPA 8270D	% Recovery	90			NA		O-21064	25-Apr-19	12-May-19
(TCMX)	EPA 8270D	% Recovery	102			NA		O-21064	25-Apr-19	12-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	12-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.83	0.193	0.5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	12-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	12-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	12-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	12-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	12-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	12-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	12-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard Shar**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	90			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	83			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	75			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	89			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	4.32	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	95			NA		O-21064	25-Apr-19	13-May-19
(PCB112)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	13-May-19
(PCB198)	EPA 8270D	% Recovery	80			NA		O-21064	25-Apr-19	13-May-19
(TCMX)	EPA 8270D	% Recovery	94			NA		O-21064	25-Apr-19	13-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21064	25-Apr-19	13-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.83	0.193	0.5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21064	25-Apr-19	13-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21064	25-Apr-19	13-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21064	25-Apr-19	13-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21064	25-Apr-19	13-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21064	25-Apr-19	13-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21064	25-Apr-19	13-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21064	25-Apr-19	13-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Surfper**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	88			NA		O-21066	07-May-19	22-May-19
(PCB112)	EPA 8270D	% Recovery	79			NA		O-21066	07-May-19	22-May-19
(PCB198)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	22-May-19
(TCMX)	EPA 8270D	% Recovery	88			NA		O-21066	07-May-19	22-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDD	EPA 8270D	ng/wet g	1.25	0.198	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.77	0.193	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	22-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	22-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	22-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	22-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21066	07-May-19	22-May-19
(PCB112)	EPA 8270D	% Recovery	87			NA		O-21066	07-May-19	22-May-19
(PCB198)	EPA 8270D	% Recovery	100			NA		O-21066	07-May-19	22-May-19
(TCMX)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	22-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.73	0.193	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	22-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	22-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	22-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	22-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.285	0.186	0.5	NA	J	O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	22-May-19
(PCB112)	EPA 8270D	% Recovery	82			NA		O-21066	07-May-19	22-May-19
(PCB198)	EPA 8270D	% Recovery	96			NA		O-21066	07-May-19	22-May-19
(TCMX)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	22-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDE	EPA 8270D	ng/wet g	1.91	0.193	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	22-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	22-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	22-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	22-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.22	0.186	0.5	NA	J	O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	95			NA		O-21066	07-May-19	22-May-19
(PCB112)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	22-May-19
(PCB198)	EPA 8270D	% Recovery	112			NA		O-21066	07-May-19	22-May-19
(TCMX)	EPA 8270D	% Recovery	104			NA		O-21066	07-May-19	22-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDE	EPA 8270D	ng/wet g	4.94	0.193	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	22-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.682	0.187	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.45	0.179	0.5	NA	J	O-21066	07-May-19	22-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	1	0.192	0.5	NA		O-21066	07-May-19	22-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	22-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.636	0.186	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	92			NA		O-21066	07-May-19	22-May-19
(PCB112)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	22-May-19
(PCB198)	EPA 8270D	% Recovery	96			NA		O-21066	07-May-19	22-May-19
(TCMX)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	22-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDE	EPA 8270D	ng/wet g	4.58	0.193	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	22-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.442	0.187	0.5	NA	J	O-21066	07-May-19	22-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.342	0.179	0.5	NA	J	O-21066	07-May-19	22-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.93	0.192	0.5	NA		O-21066	07-May-19	22-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	22-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.698	0.186	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	101			NA		O-21066	07-May-19	22-May-19
(PCB112)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	22-May-19
(PCB198)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	22-May-19
(TCMX)	EPA 8270D	% Recovery	95			NA		O-21066	07-May-19	22-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	22-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDE	EPA 8270D	ng/wet g	ND	0.193	0.5	NA		O-21066	07-May-19	22-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	22-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	22-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	22-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	22-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	22-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	22-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21066	07-May-19	22-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	82			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	86			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	ND	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	95			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	79			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	0.828	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	6.63	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.361	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	76			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	95			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	96			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.63	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.201	0.192	0.5	NA	J	O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	74			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	90			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	94			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.84	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.32	0.192	0.5	NA	J	O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	84			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	99			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	6.45	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.592	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.249	0.179	0.5	NA	J	O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	1.13	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.937	0.186	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	73			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.439	0.193	0.5	NA	J	O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	101			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	74			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	82			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.716	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.234	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	91			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	88			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	0.508	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.236	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	ND	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.254	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	95			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	90			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.86	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.193	0.187	0.5	NA	J	O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.415	0.192	0.5	NA	J	O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.435	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	100			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	102			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	4.42	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.44	0.187	0.5	NA	J	O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.183	0.179	0.5	NA	J	O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.752	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.706	0.186	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	89			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	3.93	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.344	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
(PCB112)	EPA 8270D	% Recovery	83			NA		O-21066	07-May-19	23-May-19
(PCB198)	EPA 8270D	% Recovery	96			NA		O-21066	07-May-19	23-May-19
(TCMX)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21066	07-May-19	23-May-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDE	EPA 8270D	ng/wet g	2.66	0.193	0.5	NA		O-21066	07-May-19	23-May-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21066	07-May-19	23-May-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21066	07-May-19	23-May-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21066	07-May-19	23-May-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21066	07-May-19	23-May-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21066	07-May-19	23-May-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21066	07-May-19	23-May-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.27	0.186	0.5	NA	J	O-21066	07-May-19	23-May-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	107			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	111			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	118			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	101			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	3.44	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.215	0.187	0.5	NA	J	O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.259	0.186	0.5	NA	J	O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21068	08-May-19	06-Jun-19
(PCB112)	EPA 8270D	% Recovery	107			NA		O-21068	08-May-19	06-Jun-19
(PCB198)	EPA 8270D	% Recovery	108			NA		O-21068	08-May-19	06-Jun-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21068	08-May-19	06-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	06-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	06-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	06-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	06-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	4.66	0.193	0.5	NA		O-21068	08-May-19	06-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	06-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	06-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	06-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	06-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	06-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	06-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	06-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	06-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred San**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	111			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	113			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	121			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	115			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	10.9	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	109			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	108			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	123			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	114			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	15.1	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.366	0.186	0.5	NA	J	O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	116			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	116			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	123			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	112			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	2.14	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	106			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	109			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	117			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	1.83	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	102			NA		O-21068	08-May-19	08-Jun-19
(PCB112)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	08-Jun-19
(PCB198)	EPA 8270D	% Recovery	120			NA		O-21068	08-May-19	08-Jun-19
(TCMX)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	08-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	28	0.193	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	08-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	08-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	08-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	08-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.732	0.186	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH California Ha**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	103			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	104			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	111			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	93			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	6.59	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted San**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	107			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	109			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	121			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	114			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	18.7	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.265	0.192	0.5	NA	J	O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.62	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted San**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	107			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	106			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	112			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	108			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	7.24	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.204	0.186	0.5	NA	J	O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted San**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	101			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	109			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	101			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	5.53	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White Surf**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	107			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	105			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	120			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	104			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	3.41	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	104			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	104			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	116			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	100			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	3.24	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	100			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	116			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	4.06	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.228	0.186	0.5	NA	J	O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	114			NA		O-21068	08-May-19	07-Jun-19
(PCB112)	EPA 8270D	% Recovery	113			NA		O-21068	08-May-19	07-Jun-19
(PCB198)	EPA 8270D	% Recovery	129			NA		O-21068	08-May-19	07-Jun-19
(TCMX)	EPA 8270D	% Recovery	110			NA		O-21068	08-May-19	07-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	07-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	11.6	0.193	0.5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	07-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	07-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	07-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.215	0.192	0.5	NA	J	O-21068	08-May-19	07-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	07-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	07-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.584	0.186	0.5	NA		O-21068	08-May-19	07-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	102			NA		O-21068	08-May-19	08-Jun-19
(PCB112)	EPA 8270D	% Recovery	104			NA		O-21068	08-May-19	08-Jun-19
(PCB198)	EPA 8270D	% Recovery	119			NA		O-21068	08-May-19	08-Jun-19
(TCMX)	EPA 8270D	% Recovery	97			NA		O-21068	08-May-19	08-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	1.96	0.193	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	08-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	08-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.351	0.192	0.5	NA	J	O-21068	08-May-19	08-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	08-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.523	0.186	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	106			NA		O-21068	08-May-19	08-Jun-19
(PCB112)	EPA 8270D	% Recovery	105			NA		O-21068	08-May-19	08-Jun-19
(PCB198)	EPA 8270D	% Recovery	121			NA		O-21068	08-May-19	08-Jun-19
(TCMX)	EPA 8270D	% Recovery	102			NA		O-21068	08-May-19	08-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	1.98	0.193	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	08-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	08-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	ND	0.192	0.5	NA		O-21068	08-May-19	08-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	08-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	ND	0.186	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	105			NA		O-21068	08-May-19	08-Jun-19
(PCB112)	EPA 8270D	% Recovery	106			NA		O-21068	08-May-19	08-Jun-19
(PCB198)	EPA 8270D	% Recovery	124			NA		O-21068	08-May-19	08-Jun-19
(TCMX)	EPA 8270D	% Recovery	98			NA		O-21068	08-May-19	08-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	1.45	0.193	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	08-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	ND	0.187	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	ND	0.179	0.5	NA		O-21068	08-May-19	08-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.229	0.192	0.5	NA	J	O-21068	08-May-19	08-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	08-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	0.297	0.186	0.5	NA	J	O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(PCB030)	EPA 8270D	% Recovery	111			NA		O-21068	08-May-19	08-Jun-19
(PCB112)	EPA 8270D	% Recovery	117			NA		O-21068	08-May-19	08-Jun-19
(PCB198)	EPA 8270D	% Recovery	144			NA		O-21068	08-May-19	08-Jun-19
(TCMX)	EPA 8270D	% Recovery	111			NA		O-21068	08-May-19	08-Jun-19
2,4'-DDD	EPA 8270D	ng/wet g	ND	0.267	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDE	EPA 8270D	ng/wet g	ND	0.2	0.5	NA		O-21068	08-May-19	08-Jun-19
2,4'-DDT	EPA 8270D	ng/wet g	ND	0.194	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDD	EPA 8270D	ng/wet g	ND	0.198	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDE	EPA 8270D	ng/wet g	5.94	0.193	0.5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDMU	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
4,4'-DDT	EPA 8270D	ng/wet g	ND	0.128	0.5	NA		O-21068	08-May-19	08-Jun-19
Aldrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-alpha	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-beta	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
BHC-gamma	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-alpha	EPA 8270D	ng/wet g	0.727	0.187	0.5	NA		O-21068	08-May-19	08-Jun-19
Chlordane-gamma	EPA 8270D	ng/wet g	0.336	0.179	0.5	NA	J	O-21068	08-May-19	08-Jun-19
cis-Nonachlor	EPA 8270D	ng/wet g	0.976	0.192	0.5	NA		O-21068	08-May-19	08-Jun-19
DCPA (Dacthal)	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
Dicofol	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dieldrin	EPA 8270D	ng/wet g	ND	0.1	0.2	NA		O-21068	08-May-19	08-Jun-19
Endosulfan Sulfate	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-I	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endosulfan-II	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

Chlorinated Pesticides

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Endrin	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Aldehyde	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Endrin Ketone	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Heptachlor Epoxide	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Methoxychlor	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Mirex	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Oxychlordane	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
Perthane	EPA 8270D	ng/wet g	ND	5	10	NA		O-21068	08-May-19	08-Jun-19
trans-Nonachlor	EPA 8270D	ng/wet g	1.17	0.186	0.5	NA		O-21068	08-May-19	08-Jun-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Croaker**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.4	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round Sting R**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	19.4	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	18.9	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Northern Anc**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.4	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Northern Anc**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.1	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	23.1	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.4	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.1	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.7	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard Shark**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.3	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard Shar**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.7	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.1	0.1	0.1	NA		C-43016	25-Apr-19	25-Apr-19
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Surfper**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.9	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.1	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.3	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	23.9	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	19.4	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round Sting**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	19.1	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round Sting**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	18.8	0.1	0.1	NA		C-43017	07-May-19	07-May-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.5	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.7	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted San B**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.6	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.9	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.4	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.2	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.3	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22	0.1	0.1	NA		C-43017	07-May-19	07-May-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.4	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.9	0.1	0.1	NA		C-43017	07-May-19	07-May-19
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.9	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred San B**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.3	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.2	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.5	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	19.8	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.4	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	24.5	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH California Ha**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.6	0.1	0.1	NA		C-43018	08-May-19	08-May-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.7	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.3	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	22.1	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White Surf**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.8	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Surf Per**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	20.7	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.1	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.9	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.3	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.8	0.1	0.1	NA		C-43018	08-May-19	08-May-19
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	21.3	0.1	0.1	NA		C-43018	08-May-19	08-May-19

Conventionals

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Solids	SM 2540 B	%	23.4	0.1	0.1	NA		C-43018	08-May-19	08-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Cro**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.47212	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.47212	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round St**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.274104	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.596808	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round St**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.275648	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.626816	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.116174	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.249543	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Norther**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.019922	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.349596	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Norther**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.017551	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.394944	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific C**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.164294	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.418834	0.025	0.05	NA		E-14126	23-May-19	30-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough A**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.05647	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.367908	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough A**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.058757	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.35802	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough A**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.061998	1E-05	0.00002	NA		E-15151	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.415593	0.025	0.05	NA		E-14126	23-May-19	30-May-19
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	1.06848	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.185426	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	2.025846	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.194342	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Cr**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.222888	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.234936	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Sur**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.054131	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.154451	0.025	0.05	NA		E-14127	23-May-19	30-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.094406	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.287232	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.094492	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.296487	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North A**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.019064	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.312959	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North A**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.015748	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.263432	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round St**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.367858	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.594672	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.189577	1E-05	0.00002	NA		E-15152	23-May-19	04-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.459865	0.025	0.05	NA		E-14127	23-May-19	30-May-19
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.192871	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.171098	0.025	0.05	NA		E-14128	24-May-19	30-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.155338	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.164376	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.097837	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.17577	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough A**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.056691	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.275177	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.058752	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.324	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.033726	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.26061	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.042606	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.248356	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.092644	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.4558	0.025	0.05	NA		E-14128	24-May-19	30-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.236652	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.219596	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.016866	1E-05	0.00002	NA		E-15153	23-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.199449	0.025	0.05	NA		E-14128	24-May-19	30-May-19
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.184384	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.276576	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.100834	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.297064	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfi**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.084098	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.280328	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.083127	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.267876	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.092213	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.31108	0.025	0.05	NA		E-14129	24-May-19	31-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.11165	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.321893	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.011472	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.191075	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.011972	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.212472	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.016486	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.193234	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH Califor**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.034335	1E-05	0.00002	NA		E-15154	24-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.19717	0.025	0.05	NA		E-14129	24-May-19	31-May-19
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.086563	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.254464	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.119582	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.258796	0.025	0.05	NA		E-14130	25-May-19	31-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.093356	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.256012	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.030548	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.174778	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Su**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.013626	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.187075	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.08066	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.393822	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.018559	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.24046	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.050623	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.393495	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White S**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.017655	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.190052	0.025	0.05	NA		E-14130	25-May-19	31-May-19

Elements

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Re**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.095883	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.342286	0.025	0.05	NA		E-14130	25-May-19	31-May-19
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Re**	**Matrix: Tissue**		**Dilution Factor: 1**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Mercury (Hg)	EPA 245.7	µg/wet g	0.016032	1E-05	0.00002	NA		E-15155	25-May-19	05-Jun-19
Selenium (Se)	EPA 6020	µg/wet g	0.252396	0.025	0.05	NA		E-14130	25-May-19	31-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	0.388	0.036	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	0.444	0.012	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	0.846	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	0.589	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	0.429	0.25	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	2.33	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.79	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	0.42	0.047	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	0.312	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	2.34	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	0.912	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	5.39	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	1.76	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	0.482	0.073	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	8.34	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	0.33	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	0.324	0.049	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	0.892	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	1.95	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.69	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	3.26	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	0.534	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	0.275	0.25	0.5	NA	J	O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round Sting R**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	0.624	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	0.406	0.081	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	1.57	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.243	0.027	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	0.716	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	0.34	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	2.58	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	4.28	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	0.268	0.092	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	8.6	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	0.274	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	1.47	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	2.84	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	1.09	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	1.6	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	0.794	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	0.783	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	0.216	0.036	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	0.52	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	0.405	0.081	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	0.979	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.281	0.027	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	0.477	0.047	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	0.35	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	1.97	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	0.51	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	3.38	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	0.286	0.092	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	7.07	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	0.321	0.089	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	0.386	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	0.371	0.049	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	1.2	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	2.42	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.987	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	1.49	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	0.599	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	0.625	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	1.07	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	0.654	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	0.703	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	0.599	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	2.08	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.99	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	1.13	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	2.14	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	0.691	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	4.15	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	1.93	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	0.55	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	4.9	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	0.239	0.074	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	1.2	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	0.612	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	1.01	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.61	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	2.27	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	4.98	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	5.85	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	2.98	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	7.82	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	3.95	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	10.7	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	14.6	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	2.57	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	8.39	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	11.5	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	4.21	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	24.7	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	1.98	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	15.2	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	4.29	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	33.3	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	1.38	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	1.44	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	1.27	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	2.95	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	3.23	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	3.61	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	5.96	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.19	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	10.7	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	1.14	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	3.83	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	3.87	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	2.41	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	5.59	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	3.08	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	8.47	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	10.5	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	2.08	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	6.32	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	10	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	3.25	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	19.1	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	1.41	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	11.2	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	3.18	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	25.2	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	1.38	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	0.895	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	0.514	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	3.82	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	2.02	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	2.49	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	4.11	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.38	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	8.39	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	1.47	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	0.818	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	0.832	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	0.779	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	1.13	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	0.979	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	1.42	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	1.14	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	3.94	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	4.85	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	0.823	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	2.21	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	3.68	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	1.23	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	10.4	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	0.605	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	3.82	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	1.7	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	13.2	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	0.283	0.089	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	0.574	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	0.268	0.049	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	0.746	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	1.65	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	0.818	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	1.11	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	2.14	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	1.04	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	4.49	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	0.777	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	0.777	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	2.65	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	2.73	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	5.12	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	1.6	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	1.78	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	2.72	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	4.33	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	4.2	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	11.4	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	13.5	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	2.72	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	6.26	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	12.7	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	3.95	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	29	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	1.6	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	13.5	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	3.81	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	34.3	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	1.3	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	1.52	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	1.41	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	1.26	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	4.13	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	3.05	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	4.08	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	7.63	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	3.4	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	11.4	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	1.35	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	2	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	0.332	0.104	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	1.3	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	0.883	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	2.31	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	2.96	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	4.25	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	1.26	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	1.07	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	2.75	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	4.02	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	3.46	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	9.79	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	12.6	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	2.26	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	6.16	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	12.1	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	3.91	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	26.5	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	1.43	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	13	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	3.58	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	35.5	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	1.03	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	1.45	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	1.01	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	39.7	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	3.84	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	2.33	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	3.11	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	5.42	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.21	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	12	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	0.722	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	1.71	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	0.324	0.104	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	1	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	0.753	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	2.71	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	2.62	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	4.65	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	1.57	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	1.01	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	2.79	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	5	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	3.28	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	11.2	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	12.6	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	2.19	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	6.27	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	12.4	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	3.88	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	28.2	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	1.32	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	13	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	4.07	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	36.7	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	0.952	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	0.402	0.103	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	1.45	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	0.826	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	1.53	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	3.72	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	2.2	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	3.7	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	5.52	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.62	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	11.5	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	1.92	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	0.351	0.104	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	0.862	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard Shark**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB087	EPA 8270D	ng/wet g	0.424	0.081	0.5	NA	J	O-21064	25-Apr-19	12-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB099	EPA 8270D	ng/wet g	1.04	0.028	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB118	EPA 8270D	ng/wet g	0.985	0.069	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB138	EPA 8270D	ng/wet g	1.9	0.057	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB153	EPA 8270D	ng/wet g	2.52	0.065	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	12-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	12-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard Shar**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	0.428	0.027	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	2.48	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	2.68	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	4.51	0.057	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	6.93	0.065	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	0.384	0.074	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	1.15	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	1.56	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.694	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	1.62	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	0.536	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB099	EPA 8270D	ng/wet g	0.982	0.028	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.731	0.027	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB118	EPA 8270D	ng/wet g	0.971	0.069	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB138	EPA 8270D	ng/wet g	2.02	0.057	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB149	EPA 8270D	ng/wet g	0.471	0.092	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB153	EPA 8270D	ng/wet g	2.12	0.065	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB158	EPA 8270D	ng/wet g	0.158	0.074	0.5	NA	J	O-21064	25-Apr-19	13-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB187	EPA 8270D	ng/wet g	0.949	0.168	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21064	25-Apr-19	13-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21064	25-Apr-19	13-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Surfper**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	22-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	22-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	22-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	22-May-19
PCB049	EPA 8270D	ng/wet g	0.731	0.036	0.5	NA		O-21066	07-May-19	22-May-19
PCB052	EPA 8270D	ng/wet g	0.962	0.012	0.5	NA		O-21066	07-May-19	22-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB066	EPA 8270D	ng/wet g	1.48	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB070	EPA 8270D	ng/wet g	0.725	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB074	EPA 8270D	ng/wet g	0.455	0.021	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	22-May-19
PCB087	EPA 8270D	ng/wet g	0.552	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB095	EPA 8270D	ng/wet g	0.462	0.25	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB099	EPA 8270D	ng/wet g	2.16	0.028	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.99	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB105	EPA 8270D	ng/wet g	0.807	0.047	0.5	NA		O-21066	07-May-19	22-May-19
PCB110	EPA 8270D	ng/wet g	0.645	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	22-May-19
PCB118	EPA 8270D	ng/wet g	2.7	0.069	0.5	NA		O-21066	07-May-19	22-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	22-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	22-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB138	EPA 8270D	ng/wet g	4.02	0.057	0.5	NA		O-21066	07-May-19	22-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB149	EPA 8270D	ng/wet g	0.862	0.092	0.5	NA		O-21066	07-May-19	22-May-19
PCB151	EPA 8270D	ng/wet g	0.661	0.073	0.5	NA		O-21066	07-May-19	22-May-19
PCB153	EPA 8270D	ng/wet g	4.38	0.065	0.5	NA		O-21066	07-May-19	22-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	22-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	22-May-19
PCB158	EPA 8270D	ng/wet g	0.38	0.074	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	22-May-19
PCB168+132	EPA 8270D	ng/wet g	0.194	0.094	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	22-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	22-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	22-May-19
PCB180	EPA 8270D	ng/wet g	1.42	0.154	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.555	0.056	0.5	NA		O-21066	07-May-19	22-May-19
PCB187	EPA 8270D	ng/wet g	1.64	0.168	0.5	NA		O-21066	07-May-19	22-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	22-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	22-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	22-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	22-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	22-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	22-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	22-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	22-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	22-May-19
PCB049	EPA 8270D	ng/wet g	0.509	0.036	0.5	NA		O-21066	07-May-19	22-May-19
PCB052	EPA 8270D	ng/wet g	0.642	0.012	0.5	NA		O-21066	07-May-19	22-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	22-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	22-May-19
PCB087	EPA 8270D	ng/wet g	0.914	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB095	EPA 8270D	ng/wet g	0.603	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB097	EPA 8270D	ng/wet g	0.488	0.25	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB099	EPA 8270D	ng/wet g	2.36	0.028	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	2.51	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB105	EPA 8270D	ng/wet g	0.452	0.047	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB110	EPA 8270D	ng/wet g	0.868	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	22-May-19
PCB118	EPA 8270D	ng/wet g	2.19	0.069	0.5	NA		O-21066	07-May-19	22-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	22-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	22-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB138	EPA 8270D	ng/wet g	3.69	0.057	0.5	NA		O-21066	07-May-19	22-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB149	EPA 8270D	ng/wet g	1.67	0.092	0.5	NA		O-21066	07-May-19	22-May-19
PCB151	EPA 8270D	ng/wet g	0.409	0.073	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB153	EPA 8270D	ng/wet g	5.98	0.065	0.5	NA		O-21066	07-May-19	22-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	22-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	22-May-19
PCB158	EPA 8270D	ng/wet g	0.452	0.074	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	22-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	22-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	22-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	22-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	22-May-19
PCB180	EPA 8270D	ng/wet g	1.17	0.154	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.598	0.056	0.5	NA		O-21066	07-May-19	22-May-19
PCB187	EPA 8270D	ng/wet g	1.99	0.168	0.5	NA		O-21066	07-May-19	22-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	22-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	22-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	22-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	22-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	22-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	22-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	22-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	22-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	22-May-19
PCB049	EPA 8270D	ng/wet g	0.661	0.036	0.5	NA		O-21066	07-May-19	22-May-19
PCB052	EPA 8270D	ng/wet g	0.791	0.012	0.5	NA		O-21066	07-May-19	22-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	22-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	22-May-19
PCB087	EPA 8270D	ng/wet g	0.972	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB095	EPA 8270D	ng/wet g	0.57	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB097	EPA 8270D	ng/wet g	0.702	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB099	EPA 8270D	ng/wet g	2.5	0.028	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	2.07	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB105	EPA 8270D	ng/wet g	0.511	0.047	0.5	NA		O-21066	07-May-19	22-May-19
PCB110	EPA 8270D	ng/wet g	0.807	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	22-May-19
PCB118	EPA 8270D	ng/wet g	3.03	0.069	0.5	NA		O-21066	07-May-19	22-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	22-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	22-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB138	EPA 8270D	ng/wet g	3.94	0.057	0.5	NA		O-21066	07-May-19	22-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB149	EPA 8270D	ng/wet g	1.53	0.092	0.5	NA		O-21066	07-May-19	22-May-19
PCB151	EPA 8270D	ng/wet g	0.514	0.073	0.5	NA		O-21066	07-May-19	22-May-19
PCB153	EPA 8270D	ng/wet g	5.21	0.065	0.5	NA		O-21066	07-May-19	22-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	22-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	22-May-19
PCB158	EPA 8270D	ng/wet g	0.428	0.074	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	22-May-19
PCB168+132	EPA 8270D	ng/wet g	0.15	0.094	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	22-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	22-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	22-May-19
PCB180	EPA 8270D	ng/wet g	1.33	0.154	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	22-May-19
PCB187	EPA 8270D	ng/wet g	2.2	0.168	0.5	NA		O-21066	07-May-19	22-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	22-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	22-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	22-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	22-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	22-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	22-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	22-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	22-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	22-May-19
PCB049	EPA 8270D	ng/wet g	3.12	0.036	0.5	NA		O-21066	07-May-19	22-May-19
PCB052	EPA 8270D	ng/wet g	4.05	0.012	0.5	NA		O-21066	07-May-19	22-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB070	EPA 8270D	ng/wet g	0.683	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB074	EPA 8270D	ng/wet g	0.612	0.021	0.5	NA		O-21066	07-May-19	22-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	22-May-19
PCB087	EPA 8270D	ng/wet g	2.44	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB095	EPA 8270D	ng/wet g	5.79	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB097	EPA 8270D	ng/wet g	2.9	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB099	EPA 8270D	ng/wet g	7.99	0.028	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	8.99	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB105	EPA 8270D	ng/wet g	1.79	0.047	0.5	NA		O-21066	07-May-19	22-May-19
PCB110	EPA 8270D	ng/wet g	5.54	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	22-May-19
PCB118	EPA 8270D	ng/wet g	9.4	0.069	0.5	NA		O-21066	07-May-19	22-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	22-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	22-May-19
PCB128	EPA 8270D	ng/wet g	2.68	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB138	EPA 8270D	ng/wet g	16.7	0.057	0.5	NA		O-21066	07-May-19	22-May-19
PCB141	EPA 8270D	ng/wet g	1.12	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB149	EPA 8270D	ng/wet g	11.4	0.092	0.5	NA		O-21066	07-May-19	22-May-19
PCB151	EPA 8270D	ng/wet g	3.65	0.073	0.5	NA		O-21066	07-May-19	22-May-19
PCB153	EPA 8270D	ng/wet g	20.8	0.065	0.5	NA		O-21066	07-May-19	22-May-19
PCB156	EPA 8270D	ng/wet g	1.04	0.089	0.5	NA		O-21066	07-May-19	22-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	22-May-19
PCB158	EPA 8270D	ng/wet g	1.02	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB167	EPA 8270D	ng/wet g	0.939	0.049	0.5	NA		O-21066	07-May-19	22-May-19
PCB168+132	EPA 8270D	ng/wet g	1.87	0.094	0.5	NA		O-21066	07-May-19	22-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	22-May-19
PCB170	EPA 8270D	ng/wet g	4.05	0.118	0.5	NA		O-21066	07-May-19	22-May-19
PCB174	EPA 8270D	ng/wet g	2.16	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB177	EPA 8270D	ng/wet g	3.12	0.085	0.5	NA		O-21066	07-May-19	22-May-19
PCB180	EPA 8270D	ng/wet g	5.05	0.154	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.38	0.056	0.5	NA		O-21066	07-May-19	22-May-19
PCB187	EPA 8270D	ng/wet g	7.95	0.168	0.5	NA		O-21066	07-May-19	22-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	22-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	22-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	22-May-19
PCB199(200)	EPA 8270D	ng/wet g	1.56	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	22-May-19
PCB203	EPA 8270D	ng/wet g	1.68	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB206	EPA 8270D	ng/wet g	1.72	0.155	0.5	NA		O-21066	07-May-19	22-May-19
PCB209	EPA 8270D	ng/wet g	0.641	0.25	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	22-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	22-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	22-May-19
PCB044	EPA 8270D	ng/wet g	1.15	0.028	0.5	NA		O-21066	07-May-19	22-May-19
PCB049	EPA 8270D	ng/wet g	2.88	0.036	0.5	NA		O-21066	07-May-19	22-May-19
PCB052	EPA 8270D	ng/wet g	3.07	0.012	0.5	NA		O-21066	07-May-19	22-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB066	EPA 8270D	ng/wet g	4.46	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB070	EPA 8270D	ng/wet g	0.863	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB074	EPA 8270D	ng/wet g	0.891	0.021	0.5	NA		O-21066	07-May-19	22-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	22-May-19
PCB087	EPA 8270D	ng/wet g	2.28	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB095	EPA 8270D	ng/wet g	4.57	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB097	EPA 8270D	ng/wet g	2.75	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB099	EPA 8270D	ng/wet g	7.99	0.028	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	9.05	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB105	EPA 8270D	ng/wet g	1.81	0.047	0.5	NA		O-21066	07-May-19	22-May-19
PCB110	EPA 8270D	ng/wet g	5.97	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	22-May-19
PCB118	EPA 8270D	ng/wet g	8.47	0.069	0.5	NA		O-21066	07-May-19	22-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	22-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	22-May-19
PCB128	EPA 8270D	ng/wet g	2.69	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB137	EPA 8270D	ng/wet g	0.464	0.25	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB138	EPA 8270D	ng/wet g	16.4	0.057	0.5	NA		O-21066	07-May-19	22-May-19
PCB141	EPA 8270D	ng/wet g	1.11	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB149	EPA 8270D	ng/wet g	9.93	0.092	0.5	NA		O-21066	07-May-19	22-May-19
PCB151	EPA 8270D	ng/wet g	3.48	0.073	0.5	NA		O-21066	07-May-19	22-May-19
PCB153	EPA 8270D	ng/wet g	17.9	0.065	0.5	NA		O-21066	07-May-19	22-May-19
PCB156	EPA 8270D	ng/wet g	0.821	0.089	0.5	NA		O-21066	07-May-19	22-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	22-May-19
PCB158	EPA 8270D	ng/wet g	1.14	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB167	EPA 8270D	ng/wet g	0.806	0.049	0.5	NA		O-21066	07-May-19	22-May-19
PCB168+132	EPA 8270D	ng/wet g	1.41	0.094	0.5	NA		O-21066	07-May-19	22-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	22-May-19
PCB170	EPA 8270D	ng/wet g	2.63	0.118	0.5	NA		O-21066	07-May-19	22-May-19
PCB174	EPA 8270D	ng/wet g	1.69	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB177	EPA 8270D	ng/wet g	2.18	0.085	0.5	NA		O-21066	07-May-19	22-May-19
PCB180	EPA 8270D	ng/wet g	4.79	0.154	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	1.49	0.056	0.5	NA		O-21066	07-May-19	22-May-19
PCB187	EPA 8270D	ng/wet g	6.58	0.168	0.5	NA		O-21066	07-May-19	22-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	22-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	22-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	22-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	22-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	22-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	22-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	22-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	22-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	22-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	22-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	22-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB066	EPA 8270D	ng/wet g	0.486	0.027	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	22-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	22-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	22-May-19
PCB087	EPA 8270D	ng/wet g	0.602	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB099	EPA 8270D	ng/wet g	1.16	0.028	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	22-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	22-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	22-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	22-May-19
PCB118	EPA 8270D	ng/wet g	2.36	0.069	0.5	NA		O-21066	07-May-19	22-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	22-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	22-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	22-May-19
PCB128	EPA 8270D	ng/wet g	0.796	0.081	0.5	NA		O-21066	07-May-19	22-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB138	EPA 8270D	ng/wet g	3.62	0.057	0.5	NA		O-21066	07-May-19	22-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB149	EPA 8270D	ng/wet g	0.184	0.092	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	22-May-19
PCB153	EPA 8270D	ng/wet g	8.88	0.065	0.5	NA		O-21066	07-May-19	22-May-19
PCB156	EPA 8270D	ng/wet g	0.478	0.089	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	22-May-19
PCB158	EPA 8270D	ng/wet g	0.429	0.074	0.5	NA	J	O-21066	07-May-19	22-May-19
PCB167	EPA 8270D	ng/wet g	0.522	0.049	0.5	NA		O-21066	07-May-19	22-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	22-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	22-May-19
PCB170	EPA 8270D	ng/wet g	3.07	0.118	0.5	NA		O-21066	07-May-19	22-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	22-May-19
PCB180	EPA 8270D	ng/wet g	5.09	0.154	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	1.24	0.056	0.5	NA		O-21066	07-May-19	22-May-19
PCB187	EPA 8270D	ng/wet g	1.46	0.168	0.5	NA		O-21066	07-May-19	22-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	22-May-19
PCB194	EPA 8270D	ng/wet g	2.08	0.164	0.5	NA		O-21066	07-May-19	22-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	22-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	22-May-19
PCB203	EPA 8270D	ng/wet g	1.82	0.25	0.5	NA		O-21066	07-May-19	22-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	22-May-19
PCB209	EPA 8270D	ng/wet g	0.862	0.25	0.5	NA		O-21066	07-May-19	22-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	0.646	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	1.28	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.505	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	0.692	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	0.604	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	2.5	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	0.798	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	3.38	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	0.509	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	6.02	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	0.439	0.089	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.442	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	0.457	0.049	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	1.44	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	3.12	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.943	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	1.37	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	1.02	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	0.34	0.25	0.5	NA	J	O-21066	07-May-19	23-May-19

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS Project ID: 1807003-021
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: 2018 Regional Harbor monitoring Program

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	1.07	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	0.836	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	0.97	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	0.285	0.023	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	0.428	0.021	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	1.27	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	1.38	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	0.898	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	3.09	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	3.95	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	0.538	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	1.94	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	3.02	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	6.18	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	0.433	0.25	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	3.79	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	1.03	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	7.95	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	0.311	0.089	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.484	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	0.661	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	1.1	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	1.87	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	3.1	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	0.732	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	0.809	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	1.47	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	1.68	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	0.827	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	2.94	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	3.17	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	0.417	0.047	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	1.65	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	2.96	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	5.74	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	3.51	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	1.32	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	7.6	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	0.448	0.089	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.484	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	0.551	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	0.897	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	1.13	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	2.7	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.896	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	2.59	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	1.04	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	1.01	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	1.14	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	0.383	0.023	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	0.325	0.021	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	0.839	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	1.43	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	0.874	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	2.89	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	3.15	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	0.547	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	1.55	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	2.86	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	4.9	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	0.376	0.25	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	2.92	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	0.973	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	6.41	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	0.288	0.089	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.427	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	0.511	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	1.37	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	0.567	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	1.02	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	1.78	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.73	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	2.57	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	1.17	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	2.58	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	2.65	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	0.895	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	4.33	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	1.93	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	1.46	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	2.98	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	4.3	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	3.04	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	8.23	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	9.46	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	1.98	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	5.74	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	11.2	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	3.45	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	20	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	1.15	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	8.72	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	3.14	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	24.4	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	1.2	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	0.291	0.103	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	1.27	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	0.792	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	1.62	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	3.25	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	2	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	3.28	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	6	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.06	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	7.84	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	1.25	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	1.34	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	0.86	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	ND	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	0.534	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	0.507	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	0.348	0.057	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	0.152	0.092	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	0.435	0.065	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	0.344	0.028	0.5	NA	J	O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.371	0.027	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	0.517	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	0.666	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	0.883	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.236	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	0.511	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	0.87	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	0.874	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	1.84	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.242	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	0.301	0.036	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	1.17	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.12	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	0.615	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	0.895	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	1.25	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	0.571	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	2.02	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.269	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	0.838	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	0.808	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	0.717	0.012	0.5	NA		O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	0.571	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	2.37	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.59	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	0.806	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	2.29	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	2.49	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	1.05	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	0.273	0.073	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	2.85	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.336	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	0.868	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	0.409	0.036	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	0.499	0.012	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	0.374	0.25	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	1.11	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.04	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	0.537	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	1.14	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	1.7	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	0.664	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	0.33	0.073	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	2.28	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.185	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	0.101	0.094	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	0.808	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21066	07-May-19	23-May-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21066	07-May-19	23-May-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21066	07-May-19	23-May-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21066	07-May-19	23-May-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21066	07-May-19	23-May-19
PCB052	EPA 8270D	ng/wet g	0.325	0.012	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21066	07-May-19	23-May-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21066	07-May-19	23-May-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21066	07-May-19	23-May-19
PCB087	EPA 8270D	ng/wet g	0.906	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB099	EPA 8270D	ng/wet g	1.2	0.028	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.945	0.027	0.5	NA		O-21066	07-May-19	23-May-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21066	07-May-19	23-May-19
PCB110	EPA 8270D	ng/wet g	0.71	0.074	0.5	NA		O-21066	07-May-19	23-May-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21066	07-May-19	23-May-19
PCB118	EPA 8270D	ng/wet g	1.07	0.069	0.5	NA		O-21066	07-May-19	23-May-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21066	07-May-19	23-May-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21066	07-May-19	23-May-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21066	07-May-19	23-May-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21066	07-May-19	23-May-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB138	EPA 8270D	ng/wet g	1.87	0.057	0.5	NA		O-21066	07-May-19	23-May-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB149	EPA 8270D	ng/wet g	0.85	0.092	0.5	NA		O-21066	07-May-19	23-May-19
PCB151	EPA 8270D	ng/wet g	0.216	0.073	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB153	EPA 8270D	ng/wet g	2.34	0.065	0.5	NA		O-21066	07-May-19	23-May-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21066	07-May-19	23-May-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21066	07-May-19	23-May-19
PCB158	EPA 8270D	ng/wet g	0.294	0.074	0.5	NA	J	O-21066	07-May-19	23-May-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21066	07-May-19	23-May-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21066	07-May-19	23-May-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21066	07-May-19	23-May-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21066	07-May-19	23-May-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21066	07-May-19	23-May-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21066	07-May-19	23-May-19
PCB187	EPA 8270D	ng/wet g	1.1	0.168	0.5	NA		O-21066	07-May-19	23-May-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21066	07-May-19	23-May-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21066	07-May-19	23-May-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21066	07-May-19	23-May-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21066	07-May-19	23-May-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21066	07-May-19	23-May-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21066	07-May-19	23-May-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	0.34	0.036	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	0.297	0.012	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.65	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	0.253	0.25	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.83	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.872	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.458	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	0.81	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	60.2	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	1.44	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.782	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.185	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	2.02	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.397	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	0.413	0.118	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	0.578	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.236	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.806	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB049	EPA 8270D	ng/wet g	0.277	0.036	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB052	EPA 8270D	ng/wet g	0.354	0.012	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB066	EPA 8270D	ng/wet g	0.463	0.027	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB087	EPA 8270D	ng/wet g	0.44	0.081	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB099	EPA 8270D	ng/wet g	0.772	0.028	0.5	NA		O-21068	08-May-19	06-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.632	0.027	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB110	EPA 8270D	ng/wet g	0.317	0.074	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB118	EPA 8270D	ng/wet g	0.77	0.069	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB138	EPA 8270D	ng/wet g	1.09	0.057	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB149	EPA 8270D	ng/wet g	0.345	0.092	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB153	EPA 8270D	ng/wet g	1.46	0.065	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB158	EPA 8270D	ng/wet g	0.192	0.074	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB180	EPA 8270D	ng/wet g	0.357	0.154	0.5	NA	J	O-21068	08-May-19	06-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.121	0.056	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB187	EPA 8270D	ng/wet g	0.404	0.168	0.5	NA	J	O-21068	08-May-19	06-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	06-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	06-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	0.336	0.036	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	0.223	0.012	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.615	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	0.311	0.25	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	1	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.648	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.432	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	1.14	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	0.359	0.081	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	1.48	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.577	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.175	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	1.63	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.385	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	0.153	0.049	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	0.559	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.15	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.53	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	0.521	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	0.349	0.012	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.556	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	0.504	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	0.445	0.25	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	1.33	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.1	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	0.321	0.047	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.689	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	1.84	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	0.528	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	2.73	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.91	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.191	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	2.6	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.247	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	0.255	0.049	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	0.256	0.094	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	0.807	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.329	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.961	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.251	0.028	0.5	NA	J	O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.156	0.027	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	0.282	0.057	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	0.284	0.065	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.316	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS Project ID: 1807003-021
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: 2018 Regional Harbor monitoring Program

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.407	0.081	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	ND	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	0.267	0.057	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	ND	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.189	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB049	EPA 8270D	ng/wet g	1.44	0.036	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB052	EPA 8270D	ng/wet g	1.77	0.012	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB099	EPA 8270D	ng/wet g	3.62	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	2.18	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB110	EPA 8270D	ng/wet g	1.56	0.074	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB118	EPA 8270D	ng/wet g	3.66	0.069	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB138	EPA 8270D	ng/wet g	3.79	0.057	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB149	EPA 8270D	ng/wet g	1.13	0.092	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB151	EPA 8270D	ng/wet g	0.836	0.073	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB153	EPA 8270D	ng/wet g	4.5	0.065	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB158	EPA 8270D	ng/wet g	0.459	0.074	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH California Ha**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	0.285	0.036	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	0.227	0.012	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.402	0.081	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.753	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.679	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.34	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	0.811	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	0.193	0.081	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	1.08	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.333	0.092	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	1.47	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.259	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	0.143	0.049	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.18	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.435	0.168	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	0.498	0.036	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	0.387	0.012	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	0.308	0.023	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	0.354	0.021	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.685	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	1.59	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.08	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.635	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	1.99	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	3.04	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.791	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.214	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	2.91	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.468	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	1.23	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.436	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	1.14	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.574	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.826	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.673	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	0.955	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	1.27	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.354	0.092	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.111	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	1.42	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.286	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	0.175	0.094	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.493	0.168	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.559	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.8	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.498	0.027	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.249	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	0.959	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	1.06	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.287	0.092	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	1.3	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.304	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.516	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White Surf**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.453	0.081	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.521	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.552	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	0.517	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	0.685	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.177	0.092	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	0.63	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.342	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.304	0.168	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.714	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.439	0.028	0.5	NA	J	O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.322	0.027	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	0.421	0.069	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	0.606	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.129	0.092	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	0.544	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.409	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.491	0.168	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.517	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.713	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.643	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	1.09	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	1.9	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.393	0.092	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.102	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	2.75	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.482	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	1.57	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.419	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	1.15	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB070	EPA 8270D	ng/wet g	0.496	0.023	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB074	EPA 8270D	ng/wet g	0.384	0.021	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB087	EPA 8270D	ng/wet g	0.519	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB099	EPA 8270D	ng/wet g	0.996	0.028	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.758	0.027	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB110	EPA 8270D	ng/wet g	0.519	0.074	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB118	EPA 8270D	ng/wet g	1.42	0.069	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB138	EPA 8270D	ng/wet g	2.31	0.057	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB149	EPA 8270D	ng/wet g	0.587	0.092	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB151	EPA 8270D	ng/wet g	0.18	0.073	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB153	EPA 8270D	ng/wet g	2.18	0.065	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB156	EPA 8270D	ng/wet g	0.26	0.089	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB158	EPA 8270D	ng/wet g	0.445	0.074	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB180	EPA 8270D	ng/wet g	1.55	0.154	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.339	0.056	0.5	NA	J	O-21068	08-May-19	07-Jun-19
PCB187	EPA 8270D	ng/wet g	0.883	0.168	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	07-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	07-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB049	EPA 8270D	ng/wet g	0.215	0.036	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB074	EPA 8270D	ng/wet g	0.327	0.021	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB087	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB099	EPA 8270D	ng/wet g	1.46	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	0.654	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB105	EPA 8270D	ng/wet g	0.683	0.047	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB118	EPA 8270D	ng/wet g	1.82	0.069	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB128	EPA 8270D	ng/wet g	0.571	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB138	EPA 8270D	ng/wet g	2.49	0.057	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB149	EPA 8270D	ng/wet g	0.337	0.092	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB151	EPA 8270D	ng/wet g	0.112	0.073	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB153	EPA 8270D	ng/wet g	2.93	0.065	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB156	EPA 8270D	ng/wet g	0.357	0.089	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB158	EPA 8270D	ng/wet g	0.456	0.074	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB167	EPA 8270D	ng/wet g	0.234	0.049	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB180	EPA 8270D	ng/wet g	1.54	0.154	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.436	0.056	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB187	EPA 8270D	ng/wet g	0.933	0.168	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB049	EPA 8270D	ng/wet g	ND	0.036	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB052	EPA 8270D	ng/wet g	ND	0.012	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB074	EPA 8270D	ng/wet g	ND	0.021	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB087	EPA 8270D	ng/wet g	0.356	0.081	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB095	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB097	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB099	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB105	EPA 8270D	ng/wet g	ND	0.047	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB110	EPA 8270D	ng/wet g	ND	0.074	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB118	EPA 8270D	ng/wet g	0.335	0.069	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB128	EPA 8270D	ng/wet g	ND	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB138	EPA 8270D	ng/wet g	0.381	0.057	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB141	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB149	EPA 8270D	ng/wet g	ND	0.092	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB151	EPA 8270D	ng/wet g	ND	0.073	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB153	EPA 8270D	ng/wet g	0.212	0.065	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB156	EPA 8270D	ng/wet g	ND	0.089	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB158	EPA 8270D	ng/wet g	0.337	0.074	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB167	EPA 8270D	ng/wet g	ND	0.049	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB170	EPA 8270D	ng/wet g	ND	0.118	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB180	EPA 8270D	ng/wet g	ND	0.154	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	ND	0.056	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB187	EPA 8270D	ng/wet g	ND	0.168	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB203	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB044	EPA 8270D	ng/wet g	ND	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB049	EPA 8270D	ng/wet g	0.608	0.036	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB052	EPA 8270D	ng/wet g	0.591	0.012	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB066	EPA 8270D	ng/wet g	0.756	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB070	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB074	EPA 8270D	ng/wet g	0.289	0.021	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB087	EPA 8270D	ng/wet g	0.847	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB095	EPA 8270D	ng/wet g	0.566	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB097	EPA 8270D	ng/wet g	0.42	0.25	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB099	EPA 8270D	ng/wet g	2.27	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	1.96	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB105	EPA 8270D	ng/wet g	0.648	0.047	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB110	EPA 8270D	ng/wet g	0.692	0.074	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB118	EPA 8270D	ng/wet g	2.66	0.069	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB128	EPA 8270D	ng/wet g	0.848	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB138	EPA 8270D	ng/wet g	4.71	0.057	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB141	EPA 8270D	ng/wet g	0.308	0.25	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB149	EPA 8270D	ng/wet g	1.55	0.092	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB151	EPA 8270D	ng/wet g	0.439	0.073	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB153	EPA 8270D	ng/wet g	5.72	0.065	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB156	EPA 8270D	ng/wet g	0.416	0.089	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB157	EPA 8270D	ng/wet g	ND	0.103	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB158	EPA 8270D	ng/wet g	0.455	0.074	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB167	EPA 8270D	ng/wet g	0.295	0.049	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB168+132	EPA 8270D	ng/wet g	ND	0.094	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB170	EPA 8270D	ng/wet g	1.2	0.118	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB174	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB177	EPA 8270D	ng/wet g	ND	0.085	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB180	EPA 8270D	ng/wet g	1.73	0.154	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	0.639	0.056	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB187	EPA 8270D	ng/wet g	2.32	0.168	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB194	EPA 8270D	ng/wet g	ND	0.164	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB201	EPA 8270D	ng/wet g	ND	0.104	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB203	EPA 8270D	ng/wet g	0.445	0.25	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB206	EPA 8270D	ng/wet g	ND	0.155	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS Project ID: 1807003-021
Client: Wood Environment & Infrastructure Solutions, Inc.
Project: 2018 Regional Harbor monitoring Program

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
PCB003	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB005	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB008	EPA 8270D	ng/wet g	ND	0.017	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB015	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB018	EPA 8270D	ng/wet g	ND	0.029	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB027	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB028	EPA 8270D	ng/wet g	ND	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB029	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB031	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB033	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB037	EPA 8270D	ng/wet g	ND	0.06	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB044	EPA 8270D	ng/wet g	1.2	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB049	EPA 8270D	ng/wet g	2.93	0.036	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB052	EPA 8270D	ng/wet g	2.96	0.012	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB056(060)	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB066	EPA 8270D	ng/wet g	ND	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB070	EPA 8270D	ng/wet g	0.807	0.023	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB074	EPA 8270D	ng/wet g	0.623	0.021	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB077	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB081	EPA 8270D	ng/wet g	ND	0.084	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB087	EPA 8270D	ng/wet g	2.38	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB095	EPA 8270D	ng/wet g	5.11	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB097	EPA 8270D	ng/wet g	2.89	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB099	EPA 8270D	ng/wet g	7.83	0.028	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB101	EPA 8270D	ng/wet g	7.46	0.027	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB105	EPA 8270D	ng/wet g	2.08	0.047	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB110	EPA 8270D	ng/wet g	6.13	0.074	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB114	EPA 8270D	ng/wet g	ND	0.072	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB118	EPA 8270D	ng/wet g	10.1	0.069	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB119	EPA 8270D	ng/wet g	ND	0.071	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB123	EPA 8270D	ng/wet g	ND	0.018	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB126	EPA 8270D	ng/wet g	ND	0.086	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB128	EPA 8270D	ng/wet g	3.01	0.081	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB137	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB138	EPA 8270D	ng/wet g	21	0.057	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB141	EPA 8270D	ng/wet g	1.55	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB149	EPA 8270D	ng/wet g	12.1	0.092	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB151	EPA 8270D	ng/wet g	3.62	0.073	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB153	EPA 8270D	ng/wet g	26.1	0.065	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB156	EPA 8270D	ng/wet g	1.16	0.089	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB157	EPA 8270D	ng/wet g	0.312	0.103	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB158	EPA 8270D	ng/wet g	1.07	0.074	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB167	EPA 8270D	ng/wet g	1.08	0.049	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB168+132	EPA 8270D	ng/wet g	1.4	0.094	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB169	EPA 8270D	ng/wet g	ND	0.116	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB170	EPA 8270D	ng/wet g	5.08	0.118	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB174	EPA 8270D	ng/wet g	2.34	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB177	EPA 8270D	ng/wet g	2.94	0.085	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB180	EPA 8270D	ng/wet g	6.48	0.154	0.5	NA		O-21068	08-May-19	08-Jun-19

PCB Congeners

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
PCB183	EPA 8270D	ng/wet g	2.77	0.056	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB187	EPA 8270D	ng/wet g	9.66	0.168	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB189	EPA 8270D	ng/wet g	ND	0.109	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB194	EPA 8270D	ng/wet g	2.25	0.164	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB195	EPA 8270D	ng/wet g	ND	0.093	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB199(200)	EPA 8270D	ng/wet g	2.2	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB201	EPA 8270D	ng/wet g	0.47	0.104	0.5	NA	J	O-21068	08-May-19	08-Jun-19
PCB203	EPA 8270D	ng/wet g	1.61	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB206	EPA 8270D	ng/wet g	2.71	0.155	0.5	NA		O-21068	08-May-19	08-Jun-19
PCB209	EPA 8270D	ng/wet g	ND	0.25	0.5	NA		O-21068	08-May-19	08-Jun-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	66			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	110			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round Sting R**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	80			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	119			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	71			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	113			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.304	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	63			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	117			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.74	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.353	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	42			NA	M	O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	128			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.715	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.198	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.262	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	46			NA	M	O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	123			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.524	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.154	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.236	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	79			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	112			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.177	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.557	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.0852	0.05	0.1	NA	J	O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.205	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.193	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	77			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	117			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.179	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.916	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.345	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.257	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	79			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	114			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.919	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.112	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.292	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.309	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	68			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	120			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.731	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.296	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.183	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard Shark**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	69			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	115			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.214	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.824	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.105	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.134	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard Shar**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	80			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	105			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.156	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.15	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.207	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.274	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	75			NA		O-21064	25-Apr-19	04-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	105			NA		O-21064	25-Apr-19	04-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.188	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21064	25-Apr-19	04-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	04-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Surfper**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	72			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	103			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.382	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	93			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.308	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.297	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.208	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	69			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	58			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	121			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.03	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.176	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	62			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	115			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.624	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.232	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.286	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	88			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	118			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.197	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	83			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	105			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.668	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	1.27	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	0.391	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	83			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	108			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.856	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.173	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.228	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	0.0916	0.05	0.1	NA	J	O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fish**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	75			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	107			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.775	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.209	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.232	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	63			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.135	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.775	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.212	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	69			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	120			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.741	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.228	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.161	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	82			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	97			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	66			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	110			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	88			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	100			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.278	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.17	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	115			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	103			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	78			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	103			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.531	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.169	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.13	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	36			NA	M	O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	135			NA	M	O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	72			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	106			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.04	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.187	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.289	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	73			NA		O-21066	07-May-19	15-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21066	07-May-19	15-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.676	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.249	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21066	07-May-19	15-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21066	07-May-19	15-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	69			NA		O-21068	08-May-19	17-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	113			NA		O-21068	08-May-19	17-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.987	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.352	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	17-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	60			NA		O-21068	08-May-19	17-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	114			NA		O-21068	08-May-19	17-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	17-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	48			NA	M	O-21068	08-May-19	17-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	120			NA		O-21068	08-May-19	17-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.146	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.187	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	17-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	43			NA	M	O-21068	08-May-19	17-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	122			NA		O-21068	08-May-19	17-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.314	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.85	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.164	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.222	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	17-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	17-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	75			NA		O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	78			NA		O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	99			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	45			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	118			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	0.499	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.32	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.133	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.281	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH California Ha**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	48			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	118			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	35			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	141			NA	M	O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.968	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.109	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.29	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted San**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	47			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	116			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.264	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.106	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.247	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted San**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	47			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	115			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.52	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.129	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.156	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White Surf**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	46			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	118			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	50			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	109			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.569	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	50			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	114			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	50			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	119			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	1.38	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.155	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.291	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	0.0851	0.05	0.1	NA	J	O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	51			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	112			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	51			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	111			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	62			NA		O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	117			NA		O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.156	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.18	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

PolyBrominated Diphenyl Ethers

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Rep 2**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(DFPBDE)	EPA 8270D-NCI	% Recovery	39			NA	M	O-21068	08-May-19	18-May-19
(FTBDE)	EPA 8270D-NCI	% Recovery	156			NA	M	O-21068	08-May-19	18-May-19
PBDE017	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE028	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE047	EPA 8270D-NCI	ng/wet g	0.847	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE049	EPA 8270D-NCI	ng/wet g	0.161	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE066	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE085	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE099	EPA 8270D-NCI	ng/wet g	0.133	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE100	EPA 8270D-NCI	ng/wet g	0.222	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE138	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE153	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE154	EPA 8270D-NCI	ng/wet g	0.0593	0.05	0.1	NA	J	O-21068	08-May-19	18-May-19
PBDE183	EPA 8270D-NCI	ng/wet g	ND	0.05	0.1	NA		O-21068	08-May-19	18-May-19
PBDE209	EPA 8270D-NCI	ng/wet g	ND	1	5	NA		O-21068	08-May-19	18-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	105			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	103			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	128			NA		O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	100			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	83			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round Sting R**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	117			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	110			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	152			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	104			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	93			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	111			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	110			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	154			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	92			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	90			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin Croa**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	113			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	108			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	164			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	93			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	122			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	105			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	263			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	94			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	109			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Northern Anc**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	123			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	106			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	275			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	90			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	110			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific Chub**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	94			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	194			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	66			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	121			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	104			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	211			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	96			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	120			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	105			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	224			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	98			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	127			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	111			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	244			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	102			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	102			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard Shark**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	113			NA		O-21064	25-Apr-19	12-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	111			NA		O-21064	25-Apr-19	12-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	147			NA	M	O-21064	25-Apr-19	12-May-19
(d12-Perylene)	EPA 8270D	% Recovery	111			NA		O-21064	25-Apr-19	12-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	86			NA		O-21064	25-Apr-19	12-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	12-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard Shar**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	96			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	181			NA	M	O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	99			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	71			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	105			NA		O-21064	25-Apr-19	13-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	105			NA		O-21064	25-Apr-19	13-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	185			NA	M	O-21064	25-Apr-19	13-May-19
(d12-Perylene)	EPA 8270D	% Recovery	97			NA		O-21064	25-Apr-19	13-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	85			NA		O-21064	25-Apr-19	13-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21064	25-Apr-19	13-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Surfper**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	100			NA		O-21066	07-May-19	22-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	22-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	22-May-19
(d12-Perylene)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	22-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	22-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	22-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	22-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	22-May-19
(d12-Perylene)	EPA 8270D	% Recovery	96			NA		O-21066	07-May-19	22-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	88			NA		O-21066	07-May-19	22-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	88			NA		O-21066	07-May-19	22-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	94			NA		O-21066	07-May-19	22-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	22-May-19
(d12-Perylene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	22-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	73			NA		O-21066	07-May-19	22-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	22-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	98			NA		O-21066	07-May-19	22-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	109			NA		O-21066	07-May-19	22-May-19
(d12-Perylene)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	22-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	98			NA		O-21066	07-May-19	22-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	110			NA		O-21066	07-May-19	22-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	22-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	98			NA		O-21066	07-May-19	22-May-19
(d12-Perylene)	EPA 8270D	% Recovery	110			NA		O-21066	07-May-19	22-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	22-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	108			NA		O-21066	07-May-19	22-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	120			NA		O-21066	07-May-19	22-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	137			NA	M	O-21066	07-May-19	22-May-19
(d12-Perylene)	EPA 8270D	% Recovery	130			NA		O-21066	07-May-19	22-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	77			NA		O-21066	07-May-19	22-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	22-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	87			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	96			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	102			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	101			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	74			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	102			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	109			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	111			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	114			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	72			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	100			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	111			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	112			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	78			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	103			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	104			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	80			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	112			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	105			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	103			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	104			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted San B**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	104			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	107			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	78			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	89			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	93			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	92			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	79			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	89			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	95			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	97			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	98			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	76			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	113			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	131			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	109			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	78			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	101			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	108			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	110			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	112			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	75			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	119			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	115			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	127			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	111			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	99			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	104			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	106			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	109			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	111			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	85			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfin Cro**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	105			NA		O-21066	07-May-19	23-May-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	110			NA		O-21066	07-May-19	23-May-19
(d12-Chrysene)	EPA 8270D	% Recovery	114			NA		O-21066	07-May-19	23-May-19
(d12-Perylene)	EPA 8270D	% Recovery	113			NA		O-21066	07-May-19	23-May-19
(d8-Naphthalene)	EPA 8270D	% Recovery	83			NA		O-21066	07-May-19	23-May-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21066	07-May-19	23-May-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	89			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	87			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	91			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	80			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred San B**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	06-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	06-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	06-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	06-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	76			NA		O-21068	08-May-19	06-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	06-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	100			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	93			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	51			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	96			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	89			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	96			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	91			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	63			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	95			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	88			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	94			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	95			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	72			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	97			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	83			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	85			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	88			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	71			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	89			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	74			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner Surf P**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	94			NA		O-21068	08-May-19	08-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	87			NA		O-21068	08-May-19	08-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	72			NA		O-21068	08-May-19	08-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	93			NA		O-21068	08-May-19	08-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	88			NA		O-21068	08-May-19	08-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH California Ha**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	85			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	78			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	93			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	76			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	100			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	91			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	40			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	93			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	92			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	96			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	72			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	93			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	85			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	84			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	71			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	91			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	73			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White Surf**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	87			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	83			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	75			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	75			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Surf Per**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	84			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	85			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	78			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	92			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	71			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	87			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	85			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	70			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	90			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	76			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	07-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	07-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	73			NA		O-21068	08-May-19	07-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	92			NA		O-21068	08-May-19	07-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	76			NA		O-21068	08-May-19	07-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	07-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	08-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	89			NA		O-21068	08-May-19	08-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	69			NA		O-21068	08-May-19	08-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	89			NA		O-21068	08-May-19	08-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	73			NA		O-21068	08-May-19	08-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	87			NA		O-21068	08-May-19	08-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	08-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	66			NA		O-21068	08-May-19	08-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	91			NA		O-21068	08-May-19	08-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	74			NA		O-21068	08-May-19	08-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	86			NA		O-21068	08-May-19	08-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	89			NA		O-21068	08-May-19	08-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	77			NA		O-21068	08-May-19	08-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	95			NA		O-21068	08-May-19	08-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	71			NA		O-21068	08-May-19	08-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
(d10-Acenaphthene)	EPA 8270D	% Recovery	107			NA		O-21068	08-May-19	08-Jun-19
(d10-Phenanthrene)	EPA 8270D	% Recovery	99			NA		O-21068	08-May-19	08-Jun-19
(d12-Chrysene)	EPA 8270D	% Recovery	81			NA		O-21068	08-May-19	08-Jun-19
(d12-Perylene)	EPA 8270D	% Recovery	76			NA		O-21068	08-May-19	08-Jun-19
(d8-Naphthalene)	EPA 8270D	% Recovery	97			NA		O-21068	08-May-19	08-Jun-19
1,6,7-Trimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
1-Methylphenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2,6-Dimethylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
2-Methylnaphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Acenaphthylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benz[a]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[a]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[b]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[e]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[g,h,i]perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Benzo[k]fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Biphenyl	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Chrysene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenz[a,h]anthracene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Dibenzothiophene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Fluoranthene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluorene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Indeno[1,2,3-cd]pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Naphthalene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Perylene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Phenanthrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19
Pyrene	EPA 8270D	ng/wet g	ND	1	5	NA		O-21068	08-May-19	08-Jun-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62357-R1	**C1_91202SDSBBOG18BKC Black Croaker**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.284	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62358-R1	**C1_91202SDSBBOG18RSR Round Sting R**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.492	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62359-R1	**C2_91202SDSBBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.505	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62360-R1	**C1_91202SDSBBOG18YFC Yellowfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.657	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62361-R1	**C1_91202SDSBBOG18NAC Northern Anc**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	2.91	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62362-R1	**C2_91202SDSBBOG18NAC Northern Anc**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	2.09	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62363-R1	**C1_91202SDSBBOG18PCM Pacific Chub**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.18	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62364-R1	**C1_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.37	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62365-R1	**C2_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.32	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62366-R1	**C3_91202SDSBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.36	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62367-R1	**C1_91202SDSBBOG18LPS Leopard Shark**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.155	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62368-R1	**C1_91203SDNBBOG18LPS Leopard Shar**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.212	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62369-R1	**C1_91203SDNBBOG18BKC Black Croaker**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.243	0.01	0.05	NA		C-27099	30-Apr-19	30-Apr-19
Sample ID: 62370-R1	**C1_91203SDNBBOG18BLS Black Surfper**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.435	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62371-R1	**C1_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.385	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62372-R1	**C2_91203SDNBBOG18BSB Barred Sand**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.382	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62373-R1	**C1_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	2.86	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62374-R1	**C2_91203SDNBBOG18NAC North Ancho**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.29	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62375-R1	**C1_91203SDNBBOG18RSR Round Sting**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.459	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62376-R1	**C2_91203SDNBBOG18RSR Round Sting**	**Matrix: Tissue**				**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.21	0.01	0.05	NA		C-27100	09-May-19	09-May-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62377-R1	**C1_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.468	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62378-R1	**C2_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.614	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62379-R1	**C3_91203SDNBBOG18QEF Queen fish**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.764	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62380-R1	**C1_91203SDNBBOG18SAC Slough Ancho**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.35	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62381-R1	**C1_90606MISSBOG18SSB Spotted San B**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.327	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62382-R1	**C2_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.459	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62383-R1	**C3_90606MISSBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.401	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62384-R1	**C1_90606MISSBOG18RSR Round Sting**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.514	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62385-R1	**C1_90606MISSBOG18SEL Salema**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.526	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62386-R1	**C1_90606MISSBOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	2.39	0.01	0.05	NA		C-27100	09-May-19	09-May-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62387-R1	**C1_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.525	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62388-R1	**C2_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.418	0.01	0.05	NA		C-27100	09-May-19	09-May-19
Sample ID: 62389-R1	**C3_90606MISSBOG18YFC Yellowfin Cro**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.387	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62390-R1	**C1_90208OCNHBOG18BSB Barred San B**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.472	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62391-R1	**C2_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.16	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62392-R1	**C3_90208OCNHBOG18BSB Barred San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.39	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62393-R1	**C2_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.495	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62394-R1	**C3_90208OCNHBOG18SFC Spotfin Croa**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.446	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62395-R1	**C1_90208OCNHBOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	4.36	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62396-R1	**C1_90208OCNHBOG18CAH California Ha**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.412	0.01	0.05	NA		C-27101	14-May-19	14-May-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62397-R1	**C1_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.77	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62398-R1	**C2_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.752	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62399-R1	**C3_90208OCNHBOG18SSB Spotted San**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.833	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62400-R1	**C1_90208OCNHBOG18WHS White Surf**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.756	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62401-R1	**C1_90110DANABOG18BLS Black Surf Per**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.877	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62402-R1	**C1_90110DANABOG18BSB Barred Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.627	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62403-R1	**C1_90110DANABOG18SHS Shiner Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	1.3	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62404-R1	**C1_90110DANABOG18SSB Spotted Sand**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.426	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62405-R1	**C1_90110DANABOG18WHS White Surf P**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.718	0.01	0.05	NA		C-27101	14-May-19	14-May-19
Sample ID: 62406-R1	**DUP-C2_91203SDNBBOG18BSB Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	0.44	0.01	0.05	NA		C-27101	14-May-19	14-May-19

Total Extractable Organics

ANALYTE	Method	Units	RESULT	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 62407-R1	**DUP-C1_91203SDNBBOG18NAC Rep 2**		**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
Percent Lipids	Gravimetric	% wet weight	2.81	0.01	0.05	NA		C-27101	14-May-19	14-May-19

QUALITY CONTROL REPORT

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Conventionals — QUALITY CONTROL REPORT

SAMPLE ID		BATCH ID	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Percent Solids		**Method: SM 2540 B**				**Fraction: NA**		**Prepared: 25-Apr-19**			**Analyzed: 25-Apr-19**		
62345-B1	QAQC Procedural Blank	C-43016	ND	0.1	0.1	%							
62367-R2	C1_91202SDSBBOG18L	C-43016	22.1	0.1	0.1	%					1	25	PASS
62346-B1	QAQC Procedural Blank	C-43017	ND	0.1	0.1	%							
62371-R2	C1_91203SDNBBOG18	C-43017	20.7	0.1	0.1	%					2	25	PASS
62347-B1	QAQC Procedural Blank	C-43018	ND	0.1	0.1	%							
62390-R2	C1_90208OCNHBOG18	C-43018	21.3	0.1	0.1	%					0	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(PCB030)	NA	89			% Recovery	100	89	44 - 124%	PASS			
(PCB112)	NA	93			% Recovery	100	93	49 - 133%	PASS			
(PCB198)	NA	92			% Recovery	100	92	44 - 158%	PASS			
(TCMX)	NA	86			% Recovery	100	86	38 - 122%	PASS			
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g							
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g							
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g							
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g							
4,4'-DDE	NA	ND	0.193	0.5	ng/wet g							
4,4'-DDMU	NA	ND	1	5	ng/wet g							
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g							
Aldrin	NA	ND	0.25	0.5	ng/wet g							
BHC-alpha	NA	ND	0.25	0.5	ng/wet g							
BHC-beta	NA	ND	0.25	0.5	ng/wet g							
BHC-gamma	NA	ND	0.25	0.5	ng/wet g							
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g							
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g							
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g							
DCPA (Dacthal)	NA	ND	5	10	ng/wet g							
Dicofol	NA	ND	1	5	ng/wet g							
Dieldrin	NA	ND	0.1	0.2	ng/wet g							
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g							
Endrin	NA	ND	0.25	0.5	ng/wet g							
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g							
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g							
Heptachlor	NA	ND	0.25	0.5	ng/wet g							
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g							
Mirex	NA	ND	0.25	0.5	ng/wet g							
Oxychlordane	NA	ND	0.25	0.5	ng/wet g							
Perthane	NA	ND	5	10	ng/wet g							
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(PCB030)	NA	88			% Recovery	100	0	88	44 - 124%	PASS		
(PCB112)	NA	89			% Recovery	100	0	89	49 - 133%	PASS		
(PCB198)	NA	87			% Recovery	100	0	87	44 - 158%	PASS		
(TCMX)	NA	84			% Recovery	100	0	84	38 - 122%	PASS		
2,4'-DDD	NA	491	0.267	0.5	ng/wet g	500	0	98	50 - 150%	PASS		
2,4'-DDE	NA	465	0.2	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
2,4'-DDT	NA	492	0.194	0.5	ng/wet g	500	0	98	50 - 150%	PASS		
4,4'-DDD	NA	486	0.198	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
4,4'-DDE	NA	473	0.193	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
4,4'-DDMU	NA	475	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
4,4'-DDT	NA	518	0.128	0.5	ng/wet g	500	0	104	50 - 150%	PASS		
Aldrin	NA	487	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
BHC-alpha	NA	465	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
BHC-beta	NA	456	0.25	0.5	ng/wet g	500	0	91	50 - 150%	PASS		
BHC-gamma	NA	473	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
Chlordane-alpha	NA	465	0.187	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
Chlordane-gamma	NA	466	0.179	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
cis-Nonachlor	NA	459	0.192	0.5	ng/wet g	500	0	92	50 - 150%	PASS		
DCPA (Dacthal)	NA	484	5	10	ng/wet g	500	0	97	50 - 150%	PASS		
Dicofol	NA	601	1	5	ng/wet g	500	0	120	50 - 150%	PASS		
Dieldrin	NA	486	0.1	0.2	ng/wet g	500	0	97	50 - 150%	PASS		
Endosulfan Sulfate	NA	481	0.25	0.5	ng/wet g	500	0	96	50 - 150%	PASS		
Endosulfan-I	NA	328	0.25	0.5	ng/wet g	500	0	66	50 - 150%	PASS		
Endosulfan-II	NA	269	0.25	0.5	ng/wet g	500	0	54	50 - 150%	PASS		
Endrin	NA	474	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS		
Endrin Aldehyde	NA	143	0.25	0.5	ng/wet g	500	0	29	50 - 150%	FAIL		1,Q
Endrin Ketone	NA	464	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
Heptachlor	NA	468	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS		
Heptachlor Epoxide	NA	454	0.25	0.5	ng/wet g	500	0	91	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	496	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS			
Mirex	NA	471	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS			
Oxychlordane	NA	471	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS			
Perthane	NA	495	5	10	ng/wet g	500	0	99	50 - 150%	PASS			
trans-Nonachlor	NA	445	0.186	0.5	ng/wet g	500	0	89	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62345-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 11-May-19		
(PCB030)	NA	86			% Recovery	100	0	86	44 - 124%	PASS	2	30	PASS	
(PCB112)	NA	85			% Recovery	100	0	85	49 - 133%	PASS	5	30	PASS	
(PCB198)	NA	80			% Recovery	100	0	80	44 - 158%	PASS	8	30	PASS	
(TCMX)	NA	80			% Recovery	100	0	80	38 - 122%	PASS	5	30	PASS	
2,4'-DDD	NA	476	0.267	0.5	ng/wet g	500	0	95	50 - 150%	PASS	3	25	PASS	
2,4'-DDE	NA	448	0.2	0.5	ng/wet g	500	0	90	50 - 150%	PASS	3	25	PASS	
2,4'-DDT	NA	485	0.194	0.5	ng/wet g	500	0	97	50 - 150%	PASS	1	25	PASS	
4,4'-DDD	NA	477	0.198	0.5	ng/wet g	500	0	95	50 - 150%	PASS	2	25	PASS	
4,4'-DDE	NA	469	0.193	0.5	ng/wet g	500	0	94	50 - 150%	PASS	1	25	PASS	
4,4'-DDMU	NA	478	1	5	ng/wet g	500	0	96	50 - 150%	PASS	1	25	PASS	
4,4'-DDT	NA	517	0.128	0.5	ng/wet g	500	0	103	50 - 150%	PASS	1	25	PASS	
Aldrin	NA	485	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS	0	25	PASS	
BHC-alpha	NA	483	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS	4	25	PASS	
BHC-beta	NA	476	0.25	0.5	ng/wet g	500	0	95	50 - 150%	PASS	4	25	PASS	
BHC-gamma	NA	470	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS	1	25	PASS	
Chlordane-alpha	NA	445	0.187	0.5	ng/wet g	500	0	89	50 - 150%	PASS	4	25	PASS	
Chlordane-gamma	NA	450	0.179	0.5	ng/wet g	500	0	90	50 - 150%	PASS	3	25	PASS	
cis-Nonachlor	NA	441	0.192	0.5	ng/wet g	500	0	88	50 - 150%	PASS	4	25	PASS	
DCPA (Dacthal)	NA	470	5	10	ng/wet g	500	0	94	50 - 150%	PASS	3	25	PASS	
Dicofol	NA	585	1	5	ng/wet g	500	0	117	50 - 150%	PASS	3	25	PASS	
Dieldrin	NA	470	0.1	0.2	ng/wet g	500	0	94	50 - 150%	PASS	3	25	PASS	
Endosulfan Sulfate	NA	463	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS	3	25	PASS	
Endosulfan-I	NA	325	0.25	0.5	ng/wet g	500	0	65	50 - 150%	PASS	2	25	PASS	
Endosulfan-II	NA	290	0.25	0.5	ng/wet g	500	0	58	50 - 150%	PASS	7	25	PASS	
Endrin	NA	458	0.25	0.5	ng/wet g	500	0	92	50 - 150%	PASS	3	25	PASS	
Endrin Aldehyde	NA	149	0.25	0.5	ng/wet g	500	0	30	50 - 150%	FAIL	3	25	PASS	1,Q
Endrin Ketone	NA	432	0.25	0.5	ng/wet g	500	0	86	50 - 150%	PASS	8	25	PASS	
Heptachlor	NA	464	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS	1	25	PASS	
Heptachlor Epoxide	NA	439	0.25	0.5	ng/wet g	500	0	88	50 - 150%	PASS	3	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	495	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS	0	25	PASS	
Mirex	NA	462	0.25	0.5	ng/wet g	500	0	92	50 - 150%	PASS	2	25	PASS	
Oxychlordane	NA	470	0.25	0.5	ng/wet g	500	0	94	50 - 150%	PASS	0	25	PASS	
Perthane	NA	494	5	10	ng/wet g	500	0	99	50 - 150%	PASS	0	25	PASS	
trans-Nonachlor	NA	446	0.186	0.5	ng/wet g	500	0	89	50 - 150%	PASS	0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
(PCB030)	NA	85			% Recovery	100	85	44 - 124%	PASS			
(PCB112)	NA	87			% Recovery	100	87	49 - 133%	PASS			
(PCB198)	NA	99			% Recovery	100	99	44 - 158%	PASS			
(TCMX)	NA	83			% Recovery	100	83	38 - 122%	PASS			
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g							
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g							
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g							
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g							
4,4'-DDE	NA	ND	0.193	0.5	ng/wet g							
4,4'-DDMU	NA	ND	1	5	ng/wet g							
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g							
Aldrin	NA	ND	0.25	0.5	ng/wet g							
BHC-alpha	NA	ND	0.25	0.5	ng/wet g							
BHC-beta	NA	ND	0.25	0.5	ng/wet g							
BHC-gamma	NA	ND	0.25	0.5	ng/wet g							
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g							
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g							
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g							
DCPA (Dacthal)	NA	ND	5	10	ng/wet g							
Dicofol	NA	ND	1	5	ng/wet g							
Dieldrin	NA	ND	0.1	0.2	ng/wet g							
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g							
Endrin	NA	ND	0.25	0.5	ng/wet g							
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g							
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g							
Heptachlor	NA	ND	0.25	0.5	ng/wet g							
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g							
Mirex	NA	ND	0.25	0.5	ng/wet g							
Oxychlordane	NA	ND	0.25	0.5	ng/wet g							
Perthane	NA	ND	5	10	ng/wet g							
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
(PCB030)	NA	86			% Recovery	100	0	86	44 - 124%	PASS		
(PCB112)	NA	83			% Recovery	100	0	83	49 - 133%	PASS		
(PCB198)	NA	100			% Recovery	100	0	100	44 - 158%	PASS		
(TCMX)	NA	82			% Recovery	100	0	82	38 - 122%	PASS		
2,4'-DDD	NA	466	0.267	0.5	ng/wet g	500	0	93	50 - 150%	PASS		
2,4'-DDE	NA	432	0.2	0.5	ng/wet g	500	0	86	50 - 150%	PASS		
2,4'-DDT	NA	482	0.194	0.5	ng/wet g	500	0	96	50 - 150%	PASS		
4,4'-DDD	NA	497	0.198	0.5	ng/wet g	500	0	99	50 - 150%	PASS		
4,4'-DDE	NA	439	0.193	0.5	ng/wet g	500	0	88	50 - 150%	PASS		
4,4'-DDMU	NA	454	1	5	ng/wet g	500	0	91	50 - 150%	PASS		
4,4'-DDT	NA	527	0.128	0.5	ng/wet g	500	0	105	50 - 150%	PASS		
Aldrin	NA	494	0.25	0.5	ng/wet g	500	0	99	50 - 150%	PASS		
BHC-alpha	NA	485	0.25	0.5	ng/wet g	500	0	97	50 - 150%	PASS		
BHC-beta	NA	517	0.25	0.5	ng/wet g	500	0	103	50 - 150%	PASS		
BHC-gamma	NA	491	0.25	0.5	ng/wet g	500	0	98	50 - 150%	PASS		
Chlordane-alpha	NA	422	0.187	0.5	ng/wet g	500	0	84	50 - 150%	PASS		
Chlordane-gamma	NA	441	0.179	0.5	ng/wet g	500	0	88	50 - 150%	PASS		
cis-Nonachlor	NA	445	0.192	0.5	ng/wet g	500	0	89	50 - 150%	PASS		
DCPA (Dacthal)	NA	508	5	10	ng/wet g	500	0	102	50 - 150%	PASS		
Dicofol	NA	632	1	5	ng/wet g	500	0	126	50 - 150%	PASS		
Dieldrin	NA	467	0.1	0.2	ng/wet g	500	0	93	50 - 150%	PASS		
Endosulfan Sulfate	NA	450	0.25	0.5	ng/wet g	500	0	90	50 - 150%	PASS		
Endosulfan-I	NA	298	0.25	0.5	ng/wet g	500	0	60	50 - 150%	PASS		
Endosulfan-II	NA	274	0.25	0.5	ng/wet g	500	0	55	50 - 150%	PASS		
Endrin	NA	525	0.25	0.5	ng/wet g	500	0	105	50 - 150%	PASS		
Endrin Aldehyde	NA	124	0.25	0.5	ng/wet g	500	0	25	50 - 150%	FAIL		1,Q
Endrin Ketone	NA	488	0.25	0.5	ng/wet g	500	0	98	50 - 150%	PASS		
Heptachlor	NA	532	0.25	0.5	ng/wet g	500	0	106	50 - 150%	PASS		
Heptachlor Epoxide	NA	506	0.25	0.5	ng/wet g	500	0	101	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	626	0.25	0.5	ng/wet g	500	0	125	50 - 150%	PASS			
Mirex	NA	463	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS			
Oxychlordane	NA	435	0.25	0.5	ng/wet g	500	0	87	50 - 150%	PASS			
Perthane	NA	523	5	10	ng/wet g	500	0	105	50 - 150%	PASS			
trans-Nonachlor	NA	426	0.186	0.5	ng/wet g	500	0	85	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62346-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19					Analyzed: 22-May-19		
(PCB030)	NA	89			% Recovery	100	0	89	44 - 124%	PASS	3	30	PASS	
(PCB112)	NA	82			% Recovery	100	0	82	49 - 133%	PASS	1	30	PASS	
(PCB198)	NA	99			% Recovery	100	0	99	44 - 158%	PASS	1	30	PASS	
(TCMX)	NA	85			% Recovery	100	0	85	38 - 122%	PASS	4	30	PASS	
2,4'-DDD	NA	460	0.267	0.5	ng/wet g	500	0	92	50 - 150%	PASS	1	25	PASS	
2,4'-DDE	NA	420	0.2	0.5	ng/wet g	500	0	84	50 - 150%	PASS	2	25	PASS	
2,4'-DDT	NA	473	0.194	0.5	ng/wet g	500	0	95	50 - 150%	PASS	1	25	PASS	
4,4'-DDD	NA	491	0.198	0.5	ng/wet g	500	0	98	50 - 150%	PASS	1	25	PASS	
4,4'-DDE	NA	433	0.193	0.5	ng/wet g	500	0	87	50 - 150%	PASS	1	25	PASS	
4,4'-DDMU	NA	444	1	5	ng/wet g	500	0	89	50 - 150%	PASS	2	25	PASS	
4,4'-DDT	NA	544	0.128	0.5	ng/wet g	500	0	109	50 - 150%	PASS	4	25	PASS	
Aldrin	NA	516	0.25	0.5	ng/wet g	500	0	103	50 - 150%	PASS	4	25	PASS	
BHC-alpha	NA	515	0.25	0.5	ng/wet g	500	0	103	50 - 150%	PASS	6	25	PASS	
BHC-beta	NA	533	0.25	0.5	ng/wet g	500	0	107	50 - 150%	PASS	4	25	PASS	
BHC-gamma	NA	513	0.25	0.5	ng/wet g	500	0	103	50 - 150%	PASS	5	25	PASS	
Chlordane-alpha	NA	415	0.187	0.5	ng/wet g	500	0	83	50 - 150%	PASS	1	25	PASS	
Chlordane-gamma	NA	454	0.179	0.5	ng/wet g	500	0	91	50 - 150%	PASS	3	25	PASS	
cis-Nonachlor	NA	431	0.192	0.5	ng/wet g	500	0	86	50 - 150%	PASS	3	25	PASS	
DCPA (Dacthal)	NA	495	5	10	ng/wet g	500	0	99	50 - 150%	PASS	3	25	PASS	
Dicofol	NA	648	1	5	ng/wet g	500	0	130	50 - 150%	PASS	3	25	PASS	
Dieldrin	NA	452	0.1	0.2	ng/wet g	500	0	90	50 - 150%	PASS	3	25	PASS	
Endosulfan Sulfate	NA	478	0.25	0.5	ng/wet g	500	0	96	50 - 150%	PASS	6	25	PASS	
Endosulfan-I	NA	300	0.25	0.5	ng/wet g	500	0	60	50 - 150%	PASS	0	25	PASS	
Endosulfan-II	NA	274	0.25	0.5	ng/wet g	500	0	55	50 - 150%	PASS	0	25	PASS	
Endrin	NA	568	0.25	0.5	ng/wet g	500	0	114	50 - 150%	PASS	8	25	PASS	
Endrin Aldehyde	NA	129	0.25	0.5	ng/wet g	500	0	26	50 - 150%	FAIL	4	25	PASS	1,Q
Endrin Ketone	NA	498	0.25	0.5	ng/wet g	500	0	100	50 - 150%	PASS	2	25	PASS	
Heptachlor	NA	566	0.25	0.5	ng/wet g	500	0	113	50 - 150%	PASS	6	25	PASS	
Heptachlor Epoxide	NA	511	0.25	0.5	ng/wet g	500	0	102	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	671	0.25	0.5	ng/wet g	500	0	134	50 - 150%	PASS	7	25	PASS	
Mirex	NA	454	0.25	0.5	ng/wet g	500	0	91	50 - 150%	PASS	2	25	PASS	
Oxychlordane	NA	478	0.25	0.5	ng/wet g	500	0	96	50 - 150%	PASS	10	25	PASS	
Perthane	NA	520	5	10	ng/wet g	500	0	104	50 - 150%	PASS	1	25	PASS	
trans-Nonachlor	NA	428	0.186	0.5	ng/wet g	500	0	86	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 06-Jun-19	
(PCB030)	NA	85			% Recovery	100	85	44 - 124%	PASS			
(PCB112)	NA	92			% Recovery	100	92	49 - 133%	PASS			
(PCB198)	NA	89			% Recovery	100	89	44 - 158%	PASS			
(TCMX)	NA	78			% Recovery	100	78	38 - 122%	PASS			
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g							
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g							
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g							
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g							
4,4'-DDE	NA	ND	0.193	0.5	ng/wet g							
4,4'-DDMU	NA	ND	1	5	ng/wet g							
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g							
Aldrin	NA	ND	0.25	0.5	ng/wet g							
BHC-alpha	NA	ND	0.25	0.5	ng/wet g							
BHC-beta	NA	ND	0.25	0.5	ng/wet g							
BHC-gamma	NA	ND	0.25	0.5	ng/wet g							
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g							
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g							
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g							
DCPA (Dacthal)	NA	ND	5	10	ng/wet g							
Dicofol	NA	ND	1	5	ng/wet g							
Dieldrin	NA	ND	0.1	0.2	ng/wet g							
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g							
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g							
Endrin	NA	ND	0.25	0.5	ng/wet g							
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g							
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g							
Heptachlor	NA	ND	0.25	0.5	ng/wet g							
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g							
Mirex	NA	ND	0.25	0.5	ng/wet g							
Oxychlordane	NA	ND	0.25	0.5	ng/wet g							
Perthane	NA	ND	5	10	ng/wet g							
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 06-Jun-19	
(PCB030)	NA	89			% Recovery	100	0	89	44 - 124% PASS			
(PCB112)	NA	94			% Recovery	100	0	94	49 - 133% PASS			
(PCB198)	NA	101			% Recovery	100	0	101	44 - 158% PASS			
(TCMX)	NA	82			% Recovery	100	0	82	38 - 122% PASS			
2,4'-DDD	NA	478	0.267	0.5	ng/wet g	500	0	96	50 - 150% PASS			
2,4'-DDE	NA	444	0.2	0.5	ng/wet g	500	0	89	50 - 150% PASS			
2,4'-DDT	NA	592	0.194	0.5	ng/wet g	500	0	118	50 - 150% PASS			
4,4'-DDD	NA	496	0.198	0.5	ng/wet g	500	0	99	50 - 150% PASS			
4,4'-DDE	NA	471	0.193	0.5	ng/wet g	500	0	94	50 - 150% PASS			
4,4'-DDMU	NA	482	1	5	ng/wet g	500	0	96	50 - 150% PASS			
4,4'-DDT	NA	761	0.128	0.5	ng/wet g	500	0	152	50 - 150% FAIL			1,Q
Aldrin	NA	471	0.25	0.5	ng/wet g	500	0	94	50 - 150% PASS			
BHC-alpha	NA	431	0.25	0.5	ng/wet g	500	0	86	50 - 150% PASS			
BHC-beta	NA	466	0.25	0.5	ng/wet g	500	0	93	50 - 150% PASS			
BHC-gamma	NA	445	0.25	0.5	ng/wet g	500	0	89	50 - 150% PASS			
Chlordane-alpha	NA	443	0.187	0.5	ng/wet g	500	0	89	50 - 150% PASS			
Chlordane-gamma	NA	467	0.179	0.5	ng/wet g	500	0	93	50 - 150% PASS			
cis-Nonachlor	NA	474	0.192	0.5	ng/wet g	500	0	95	50 - 150% PASS			
DCPA (Dacthal)	NA	490	5	10	ng/wet g	500	0	98	50 - 150% PASS			
Dicofol	NA	438	1	5	ng/wet g	500	0	88	50 - 150% PASS			
Dieldrin	NA	476	0.1	0.2	ng/wet g	500	0	95	50 - 150% PASS			
Endosulfan Sulfate	NA	505	0.25	0.5	ng/wet g	500	0	101	50 - 150% PASS			
Endosulfan-I	NA	325	0.25	0.5	ng/wet g	500	0	65	50 - 150% PASS			
Endosulfan-II	NA	280	0.25	0.5	ng/wet g	500	0	56	50 - 150% PASS			
Endrin	NA	599	0.25	0.5	ng/wet g	500	0	120	50 - 150% PASS			
Endrin Aldehyde	NA	154	0.25	0.5	ng/wet g	500	0	31	50 - 150% FAIL			1,Q
Endrin Ketone	NA	554	0.25	0.5	ng/wet g	500	0	111	50 - 150% PASS			
Heptachlor	NA	608	0.25	0.5	ng/wet g	500	0	122	50 - 150% PASS			
Heptachlor Epoxide	NA	530	0.25	0.5	ng/wet g	500	0	106	50 - 150% PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	854	0.25	0.5	ng/wet g	500	0	171	50 - 150%	FAIL			1,Q
Mirex	NA	489	0.25	0.5	ng/wet g	500	0	98	50 - 150%	PASS			
Oxychlordane	NA	465	0.25	0.5	ng/wet g	500	0	93	50 - 150%	PASS			
Perthane	NA	638	5	10	ng/wet g	500	0	128	50 - 150%	PASS			
trans-Nonachlor	NA	452	0.186	0.5	ng/wet g	500	0	90	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62347-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19					Analyzed: 06-Jun-19		
(PCB030)	NA	86			% Recovery	100	0	86	44 - 124%	PASS	3	30	PASS	
(PCB112)	NA	91			% Recovery	100	0	91	49 - 133%	PASS	3	30	PASS	
(PCB198)	NA	98			% Recovery	100	0	98	44 - 158%	PASS	3	30	PASS	
(TCMX)	NA	79			% Recovery	100	0	79	38 - 122%	PASS	4	30	PASS	
2,4'-DDD	NA	467	0.267	0.5	ng/wet g	500	0	93	50 - 150%	PASS	3	25	PASS	
2,4'-DDE	NA	410	0.2	0.5	ng/wet g	500	0	82	50 - 150%	PASS	8	25	PASS	
2,4'-DDT	NA	578	0.194	0.5	ng/wet g	500	0	116	50 - 150%	PASS	2	25	PASS	
4,4'-DDD	NA	491	0.198	0.5	ng/wet g	500	0	98	50 - 150%	PASS	1	25	PASS	
4,4'-DDE	NA	437	0.193	0.5	ng/wet g	500	0	87	50 - 150%	PASS	8	25	PASS	
4,4'-DDMU	NA	449	1	5	ng/wet g	500	0	90	50 - 150%	PASS	6	25	PASS	
4,4'-DDT	NA	774	0.128	0.5	ng/wet g	500	0	155	50 - 150%	FAIL	2	25	PASS	1,Q
Aldrin	NA	434	0.25	0.5	ng/wet g	500	0	87	50 - 150%	PASS	8	25	PASS	
BHC-alpha	NA	413	0.25	0.5	ng/wet g	500	0	83	50 - 150%	PASS	4	25	PASS	
BHC-beta	NA	442	0.25	0.5	ng/wet g	500	0	88	50 - 150%	PASS	6	25	PASS	
BHC-gamma	NA	428	0.25	0.5	ng/wet g	500	0	86	50 - 150%	PASS	3	25	PASS	
Chlordane-alpha	NA	421	0.187	0.5	ng/wet g	500	0	84	50 - 150%	PASS	6	25	PASS	
Chlordane-gamma	NA	440	0.179	0.5	ng/wet g	500	0	88	50 - 150%	PASS	6	25	PASS	
cis-Nonachlor	NA	434	0.192	0.5	ng/wet g	500	0	87	50 - 150%	PASS	9	25	PASS	
DCPA (Dacthal)	NA	466	5	10	ng/wet g	500	0	93	50 - 150%	PASS	5	25	PASS	
Dicofol	NA	393	1	5	ng/wet g	500	0	79	50 - 150%	PASS	11	25	PASS	
Dieldrin	NA	453	0.1	0.2	ng/wet g	500	0	91	50 - 150%	PASS	4	25	PASS	
Endosulfan Sulfate	NA	500	0.25	0.5	ng/wet g	500	0	100	50 - 150%	PASS	1	25	PASS	
Endosulfan-I	NA	264	0.25	0.5	ng/wet g	500	0	53	50 - 150%	PASS	20	25	PASS	
Endosulfan-II	NA	318	0.25	0.5	ng/wet g	500	0	64	50 - 150%	PASS	13	25	PASS	
Endrin	NA	522	0.25	0.5	ng/wet g	500	0	104	50 - 150%	PASS	14	25	PASS	
Endrin Aldehyde	NA	164	0.25	0.5	ng/wet g	500	0	33	50 - 150%	FAIL	6	25	PASS	1,Q
Endrin Ketone	NA	542	0.25	0.5	ng/wet g	500	0	108	50 - 150%	PASS	3	25	PASS	
Heptachlor	NA	629	0.25	0.5	ng/wet g	500	0	126	50 - 150%	PASS	3	25	PASS	
Heptachlor Epoxide	NA	521	0.25	0.5	ng/wet g	500	0	104	50 - 150%	PASS	2	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	901	0.25	0.5	ng/wet g	500	0	180	50 - 150%	FAIL	5	25	PASS	1,Q
Mirex	NA	459	0.25	0.5	ng/wet g	500	0	92	50 - 150%	PASS	6	25	PASS	
Oxychlordane	NA	430	0.25	0.5	ng/wet g	500	0	86	50 - 150%	PASS	8	25	PASS	
Perthane	NA	638	5	10	ng/wet g	500	0	128	50 - 150%	PASS	0	25	PASS	
trans-Nonachlor	NA	429	0.186	0.5	ng/wet g	500	0	86	50 - 150%	PASS	5	25	PASS	
Sample ID: 62354-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**			**Sampled:**				**Received:**		
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 11-May-19		
(PCB030)	NA	149			% Recovery	100		149	41 - 154%	PASS				
(PCB112)	NA	130			% Recovery	100		130	45 - 162%	PASS				
(PCB198)	NA	73			% Recovery	100		73	36 - 120%	PASS				
(TCMX)	NA	188			% Recovery	100		188	41 - 166%	FAIL				
2,4'-DDD	NA	31	0.267	0.5	ng/wet g	3.31		937	50 - 150%	FAIL				1
2,4'-DDE	NA	34.9	0.2	0.5	ng/wet g	3.39		1029	50 - 150%	FAIL				1
2,4'-DDT	NA	140	0.194	0.5	ng/wet g	15.7		892	50 - 150%	FAIL				1
4,4'-DDD	NA	48.7	0.198	0.5	ng/wet g	45.9		106	50 - 150%	PASS				
4,4'-DDE	NA	1020	0.193	0.5	ng/wet g	720		142	50 - 150%	PASS				
4,4'-DDT	NA	69.1	0.128	0.5	ng/wet g	59.5		116	50 - 150%	PASS				
BHC-alpha	NA	2.2	0.25	0.5	ng/wet g	1.06		208	50 - 150%	FAIL				1
Chlordane-alpha	NA	55.6	0.187	0.5	ng/wet g	49		113	50 - 150%	PASS				
Chlordane-gamma	NA	18.4	0.179	0.5	ng/wet g	12.8		144	50 - 150%	PASS				
cis-Nonachlor	NA	58.6	0.192	0.5	ng/wet g	54.1		108	50 - 150%	PASS				
Dieldrin	NA	112	0.1	0.2	ng/wet g	80.8		139	50 - 150%	PASS				
Heptachlor Epoxide	NA	15.5	0.25	0.5	ng/wet g	13.4		116	50 - 150%	PASS				
Mirex	NA	7.57	0.25	0.5	ng/wet g	5.09		149	50 - 150%	PASS				
Oxychlordane	NA	24.1	0.25	0.5	ng/wet g	23.6		102	50 - 150%	PASS				
trans-Nonachlor	NA	168	0.186	0.5	ng/wet g	127		132	50 - 150%	PASS				

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62355-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19			Analyzed: 22-May-19		
(PCB030)	NA	109			% Recovery	100	109	41 - 154%	PASS			
(PCB112)	NA	112			% Recovery	100	112	45 - 162%	PASS			
(PCB198)	NA	82			% Recovery	100	82	36 - 120%	PASS			
(TCMX)	NA	124			% Recovery	100	124	41 - 166%	PASS			
2,4'-DDD	NA	14.7	0.267	0.5	ng/wet g	3.31	444	50 - 150%	FAIL			1
2,4'-DDE	NA	2.64	0.2	0.5	ng/wet g	3.39	78	50 - 150%	PASS			
2,4'-DDT	NA	169	0.194	0.5	ng/wet g	15.7	1076	50 - 150%	FAIL			1
4,4'-DDD	NA	68.1	0.198	0.5	ng/wet g	45.9	148	50 - 150%	PASS			
4,4'-DDE	NA	860	0.193	0.5	ng/wet g	720	119	50 - 150%	PASS			
4,4'-DDT	NA	82.7	0.128	0.5	ng/wet g	59.5	139	50 - 150%	PASS			
BHC-alpha	NA	5.13	0.25	0.5	ng/wet g	1.06	484	50 - 150%	FAIL			1
Chlordane-alpha	NA	56	0.187	0.5	ng/wet g	49	114	50 - 150%	PASS			
Chlordane-gamma	NA	9.83	0.179	0.5	ng/wet g	12.8	77	50 - 150%	PASS			
cis-Nonachlor	NA	51.6	0.192	0.5	ng/wet g	54.1	95	50 - 150%	PASS			
Dieldrin	NA	113	0.1	0.2	ng/wet g	80.8	140	50 - 150%	PASS			
Heptachlor Epoxide	NA	18.8	0.25	0.5	ng/wet g	13.4	140	50 - 150%	PASS			
Mirex	NA	4.59	0.25	0.5	ng/wet g	5.09	90	50 - 150%	PASS			
Oxychlordane	NA	33.1	0.25	0.5	ng/wet g	23.6	140	50 - 150%	PASS			
trans-Nonachlor	NA	154	0.186	0.5	ng/wet g	127	121	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62356-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19			Analyzed: 06-Jun-19		
(PCB030)	NA	111			% Recovery	100	111	41 - 154%	PASS			
(PCB112)	NA	93			% Recovery	100	93	45 - 162%	PASS			
(PCB198)	NA	116			% Recovery	100	116	36 - 120%	PASS			
(TCMX)	NA	108			% Recovery	100	108	41 - 166%	PASS			
2,4'-DDD	NA	32.8	0.267	0.5	ng/wet g	3.31	991	50 - 150%	FAIL			1
2,4'-DDE	NA	22.9	0.2	0.5	ng/wet g	3.39	676	50 - 150%	FAIL			1
2,4'-DDT	NA	95.6	0.194	0.5	ng/wet g	15.7	609	50 - 150%	FAIL			1
4,4'-DDD	NA	33.4	0.198	0.5	ng/wet g	45.9	73	50 - 150%	PASS			
4,4'-DDE	NA	672	0.193	0.5	ng/wet g	720	93	50 - 150%	PASS			
4,4'-DDT	NA	92.1	0.128	0.5	ng/wet g	59.5	155	50 - 150%	FAIL			1
BHC-alpha	NA	1.29	0.25	0.5	ng/wet g	1.06	122	50 - 150%	PASS			
Chlordane-alpha	NA	37	0.187	0.5	ng/wet g	49	76	50 - 150%	PASS			
Chlordane-gamma	NA	12.3	0.179	0.5	ng/wet g	12.8	96	50 - 150%	PASS			
cis-Nonachlor	NA	46.3	0.192	0.5	ng/wet g	54.1	86	50 - 150%	PASS			
Dieldrin	NA	59.4	0.1	0.2	ng/wet g	80.8	74	50 - 150%	PASS			
Heptachlor Epoxide	NA	17.3	0.25	0.5	ng/wet g	13.4	129	50 - 150%	PASS			
Mirex	NA	4.09	0.25	0.5	ng/wet g	5.09	80	50 - 150%	PASS			
Oxychlordane	NA	27.5	0.25	0.5	ng/wet g	23.6	117	50 - 150%	PASS			
trans-Nonachlor	NA	124	0.186	0.5	ng/wet g	127	98	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS1	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 11-May-19	
(PCB030)	NA	102			% Recovery	100	0	102	51 - 137%	PASS			
(PCB112)	NA	111			% Recovery	100	0	111	53 - 150%	PASS			
(PCB198)	NA	99			% Recovery	100	0	99	25 - 146%	PASS			
(TCMX)	NA	100			% Recovery	100	0	100	50 - 144%	PASS			
2,4'-DDD	NA	106	0.267	0.5	ng/wet g	96.3	0	110	50 - 150%	PASS			
2,4'-DDE	NA	99.8	0.2	0.5	ng/wet g	96.3	0	104	50 - 150%	PASS			
2,4'-DDT	NA	138	0.194	0.5	ng/wet g	96.3	0	143	50 - 150%	PASS			
4,4'-DDD	NA	75.3	0.198	0.5	ng/wet g	96.3	0	78	50 - 150%	PASS			
4,4'-DDE	NA	102	0.193	0.5	ng/wet g	96.3	2.3	104	50 - 150%	PASS			
4,4'-DDMU	NA	102	1	5	ng/wet g	96.3	0	106	50 - 150%	PASS			
4,4'-DDT	NA	88	0.128	0.5	ng/wet g	96.3	0	91	50 - 150%	PASS			
Aldrin	NA	99	0.25	0.5	ng/wet g	96.3	0	103	50 - 150%	PASS			
BHC-alpha	NA	103	0.25	0.5	ng/wet g	96.3	0	107	50 - 150%	PASS			
BHC-beta	NA	30.8	0.25	0.5	ng/wet g	96.3	0	32	50 - 150%	FAIL			1,M
BHC-gamma	NA	110	0.25	0.5	ng/wet g	96.3	0	114	50 - 150%	PASS			
Chlordane-alpha	NA	92.1	0.187	0.5	ng/wet g	96.3	0	96	50 - 150%	PASS			
Chlordane-gamma	NA	93.4	0.179	0.5	ng/wet g	96.3	0	97	50 - 150%	PASS			
cis-Nonachlor	NA	85.4	0.192	0.5	ng/wet g	96.3	0	89	50 - 150%	PASS			
DCPA (Dacthal)	NA	97.2	5	10	ng/wet g	96.3	0	101	50 - 150%	PASS			
Dicofol	NA	283	1	5	ng/wet g	96.3	0	294	50 - 150%	FAIL			1,M
Dieldrin	NA	106	0.1	0.2	ng/wet g	96.3	0	110	50 - 150%	PASS			
Endosulfan Sulfate	NA	104	0.25	0.5	ng/wet g	96.3	0	108	50 - 150%	PASS			
Endosulfan-I	NA	85.2	0.25	0.5	ng/wet g	96.3	0	88	50 - 150%	PASS			
Endosulfan-II	NA	64.9	0.25	0.5	ng/wet g	96.3	0	67	50 - 150%	PASS			
Endrin	NA	95.2	0.25	0.5	ng/wet g	96.3	0	99	50 - 150%	PASS			
Endrin Aldehyde	NA	21.6	0.25	0.5	ng/wet g	96.3	0	22	50 - 150%	FAIL			1,Q
Endrin Ketone	NA	90.8	0.25	0.5	ng/wet g	96.3	0	94	50 - 150%	PASS			
Heptachlor	NA	97.5	0.25	0.5	ng/wet g	96.3	0	101	50 - 150%	PASS			
Heptachlor Epoxide	NA	88.8	0.25	0.5	ng/wet g	96.3	0	92	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	83.6	0.25	0.5	ng/wet g	96.3	0	87	50 - 150%	PASS			
Mirex	NA	93.1	0.25	0.5	ng/wet g	96.3	0	97	50 - 150%	PASS			
Oxychlordane	NA	98.5	0.25	0.5	ng/wet g	96.3	0	102	50 - 150%	PASS			
Perthane	NA	106	5	10	ng/wet g	96.3	0	110	50 - 150%	PASS			
trans-Nonachlor	NA	84.4	0.186	0.5	ng/wet g	96.3	0	88	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62367-MS2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 11-May-19		
(PCB030)	NA	100			% Recovery	100	0	100	51 - 137%	PASS	2	30	PASS	
(PCB112)	NA	103			% Recovery	100	0	103	53 - 150%	PASS	7	30	PASS	
(PCB198)	NA	88			% Recovery	100	0	88	25 - 146%	PASS	12	30	PASS	
(TCMX)	NA	94			% Recovery	100	0	94	50 - 144%	PASS	6	30	PASS	
2,4'-DDD	NA	88.8	0.267	0.5	ng/wet g	87.9	0	101	50 - 150%	PASS	9	25	PASS	
2,4'-DDE	NA	81.2	0.2	0.5	ng/wet g	87.9	0	92	50 - 150%	PASS	12	25	PASS	
2,4'-DDT	NA	103	0.194	0.5	ng/wet g	87.9	0	117	50 - 150%	PASS	20	25	PASS	
4,4'-DDD	NA	75	0.198	0.5	ng/wet g	87.9	0	85	50 - 150%	PASS	9	25	PASS	
4,4'-DDE	NA	86.8	0.193	0.5	ng/wet g	87.9	2.3	96	50 - 150%	PASS	8	25	PASS	
4,4'-DDMU	NA	84.1	1	5	ng/wet g	87.9	0	96	50 - 150%	PASS	10	25	PASS	
4,4'-DDT	NA	77.2	0.128	0.5	ng/wet g	87.9	0	88	50 - 150%	PASS	3	25	PASS	
Aldrin	NA	84.6	0.25	0.5	ng/wet g	87.9	0	96	50 - 150%	PASS	7	25	PASS	
BHC-alpha	NA	91.6	0.25	0.5	ng/wet g	87.9	0	104	50 - 150%	PASS	3	25	PASS	
BHC-beta	NA	31.8	0.25	0.5	ng/wet g	87.9	0	36	50 - 150%	FAIL	12	25	PASS	1,M
BHC-gamma	NA	111	0.25	0.5	ng/wet g	87.9	0	126	50 - 150%	PASS	10	25	PASS	
Chlordane-alpha	NA	74.9	0.187	0.5	ng/wet g	87.9	0	85	50 - 150%	PASS	12	25	PASS	
Chlordane-gamma	NA	77	0.179	0.5	ng/wet g	87.9	0	88	50 - 150%	PASS	10	25	PASS	
cis-Nonachlor	NA	77	0.192	0.5	ng/wet g	87.9	0	88	50 - 150%	PASS	1	25	PASS	
DCPA (Dacthal)	NA	84.1	5	10	ng/wet g	87.9	0	96	50 - 150%	PASS	5	25	PASS	
Dicofol	NA	202	1	5	ng/wet g	87.9	0	230	50 - 150%	FAIL	24	25	PASS	1,M
Dieldrin	NA	83.5	0.1	0.2	ng/wet g	87.9	0	95	50 - 150%	PASS	15	25	PASS	
Endosulfan Sulfate	NA	84.9	0.25	0.5	ng/wet g	87.9	0	97	50 - 150%	PASS	11	25	PASS	
Endosulfan-I	NA	63.2	0.25	0.5	ng/wet g	87.9	0	72	50 - 150%	PASS	20	25	PASS	
Endosulfan-II	NA	56.3	0.25	0.5	ng/wet g	87.9	0	64	50 - 150%	PASS	5	25	PASS	
Endrin	NA	79.6	0.25	0.5	ng/wet g	87.9	0	91	50 - 150%	PASS	8	25	PASS	
Endrin Aldehyde	NA	16.6	0.25	0.5	ng/wet g	87.9	0	19	50 - 150%	FAIL	15	25	PASS	1,Q
Endrin Ketone	NA	86.6	0.25	0.5	ng/wet g	87.9	0	99	50 - 150%	PASS	5	25	PASS	
Heptachlor	NA	86.4	0.25	0.5	ng/wet g	87.9	0	98	50 - 150%	PASS	3	25	PASS	
Heptachlor Epoxide	NA	81.5	0.25	0.5	ng/wet g	87.9	0	93	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	74.1	0.25	0.5	ng/wet g	87.9	0	84	50 - 150%	PASS	4	25	PASS	
Mirex	NA	79.1	0.25	0.5	ng/wet g	87.9	0	90	50 - 150%	PASS	7	25	PASS	
Oxychlordane	NA	82.8	0.25	0.5	ng/wet g	87.9	0	94	50 - 150%	PASS	8	25	PASS	
Perthane	NA	88.5	5	10	ng/wet g	87.9	0	101	50 - 150%	PASS	9	25	PASS	
trans-Nonachlor	NA	75	0.186	0.5	ng/wet g	87.9	0	85	50 - 150%	PASS	3	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62367-R2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**			
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19			Analyzed: 12-May-19			
(PCB030)	NA	100			% Recovery	100	100	51 - 137%	PASS		1	30	PASS	
(PCB112)	NA	96			% Recovery	100	96	53 - 150%	PASS		4	30	PASS	
(PCB198)	NA	97			% Recovery	100	97	25 - 146%	PASS		7	30	PASS	
(TCMX)	NA	100			% Recovery	100	100	50 - 144%	PASS		2	30	PASS	
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g						0	25	PASS	
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g						0	25	PASS	
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g						0	25	PASS	
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g						0	25	PASS	
4,4'-DDE	NA	1.77	0.193	0.5	ng/wet g						46	25	FAIL	SL
4,4'-DDMU	NA	ND	1	5	ng/wet g						0	25	PASS	
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g						0	25	PASS	
Aldrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
BHC-alpha	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
BHC-beta	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
BHC-gamma	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g						0	25	PASS	
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g						0	25	PASS	
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g						0	25	PASS	
DCPA (Dacthal)	NA	ND	5	10	ng/wet g						0	25	PASS	
Dicofol	NA	ND	1	5	ng/wet g						0	25	PASS	
Dieldrin	NA	ND	0.1	0.2	ng/wet g						0	25	PASS	
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Heptachlor	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g						0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Mirex	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Oxychlordane	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Perthane	NA	ND	5	10	ng/wet g					0	25 PASS	
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g					0	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-MS1	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19			Analyzed: 22-May-19		
(PCB030)	NA	106			% Recovery	100	0	106	51 - 137% PASS			
(PCB112)	NA	89			% Recovery	100	0	89	53 - 150% PASS			
(PCB198)	NA	92			% Recovery	100	0	92	25 - 146% PASS			
(TCMX)	NA	105			% Recovery	100	0	105	50 - 144% PASS			
2,4'-DDD	NA	95.8	0.267	0.5	ng/wet g	88.1	0	109	50 - 150% PASS			
2,4'-DDE	NA	78.7	0.2	0.5	ng/wet g	88.1	0	89	50 - 150% PASS			
2,4'-DDT	NA	92.2	0.194	0.5	ng/wet g	88.1	0	105	50 - 150% PASS			
4,4'-DDD	NA	98.7	0.198	0.5	ng/wet g	88.1	0	112	50 - 150% PASS			
4,4'-DDE	NA	82.1	0.193	0.5	ng/wet g	88.1	1.62	91	50 - 150% PASS			
4,4'-DDMU	NA	84.5	1	5	ng/wet g	88.1	0	96	50 - 150% PASS			
4,4'-DDT	NA	94.1	0.128	0.5	ng/wet g	88.1	0	107	50 - 150% PASS			
Aldrin	NA	107	0.25	0.5	ng/wet g	88.1	0	121	50 - 150% PASS			
BHC-alpha	NA	110	0.25	0.5	ng/wet g	88.1	0	125	50 - 150% PASS			
BHC-beta	NA	99.4	0.25	0.5	ng/wet g	88.1	0	113	50 - 150% PASS			
BHC-gamma	NA	111	0.25	0.5	ng/wet g	88.1	0	126	50 - 150% PASS			
Chlordane-alpha	NA	78.9	0.187	0.5	ng/wet g	88.1	0	90	50 - 150% PASS			
Chlordane-gamma	NA	86.1	0.179	0.5	ng/wet g	88.1	0	98	50 - 150% PASS			
cis-Nonachlor	NA	76.1	0.192	0.5	ng/wet g	88.1	0	86	50 - 150% PASS			
DCPA (Dacthal)	NA	101	5	10	ng/wet g	88.1	0	115	50 - 150% PASS			
Dicofol	NA	131	1	5	ng/wet g	88.1	0	149	50 - 150% PASS			
Dieldrin	NA	82.6	0.1	0.2	ng/wet g	88.1	0	94	50 - 150% PASS			
Endosulfan Sulfate	NA	90.9	0.25	0.5	ng/wet g	88.1	0	103	50 - 150% PASS			
Endosulfan-I	NA	54	0.25	0.5	ng/wet g	88.1	0	61	50 - 150% PASS			
Endosulfan-II	NA	55.5	0.25	0.5	ng/wet g	88.1	0	63	50 - 150% PASS			
Endrin	NA	113	0.25	0.5	ng/wet g	88.1	0	128	50 - 150% PASS			
Endrin Aldehyde	NA	32.2	0.25	0.5	ng/wet g	88.1	0	37	50 - 150% FAIL			1,Q
Endrin Ketone	NA	103	0.25	0.5	ng/wet g	88.1	0	117	50 - 150% PASS			
Heptachlor	NA	130	0.25	0.5	ng/wet g	88.1	0	148	50 - 150% PASS			
Heptachlor Epoxide	NA	107	0.25	0.5	ng/wet g	88.1	0	121	50 - 150% PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	126	0.25	0.5	ng/wet g	88.1	0	143	50 - 150%	PASS			
Mirex	NA	79	0.25	0.5	ng/wet g	88.1	0	90	50 - 150%	PASS			
Oxychlordane	NA	87.8	0.25	0.5	ng/wet g	88.1	0	100	50 - 150%	PASS			
Perthane	NA	106	5	10	ng/wet g	88.1	0	120	50 - 150%	PASS			
trans-Nonachlor	NA	79.2	0.186	0.5	ng/wet g	88.1	0.244	90	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62371-MS2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21066			Prepared: 07-May-19				Analyzed: 22-May-19		
(PCB030)	NA	97			% Recovery	100	0	97	51 - 137%	PASS	9	30	PASS	
(PCB112)	NA	82			% Recovery	100	0	82	53 - 150%	PASS	8	30	PASS	
(PCB198)	NA	88			% Recovery	100	0	88	25 - 146%	PASS	4	30	PASS	
(TCMX)	NA	96			% Recovery	100	0	96	50 - 144%	PASS	9	30	PASS	
2,4'-DDD	NA	89.6	0.267	0.5	ng/wet g	88.5	0	101	50 - 150%	PASS	8	25	PASS	
2,4'-DDE	NA	73.6	0.2	0.5	ng/wet g	88.5	0	83	50 - 150%	PASS	7	25	PASS	
2,4'-DDT	NA	82.5	0.194	0.5	ng/wet g	88.5	0	93	50 - 150%	PASS	12	25	PASS	
4,4'-DDD	NA	96.8	0.198	0.5	ng/wet g	88.5	0	109	50 - 150%	PASS	3	25	PASS	
4,4'-DDE	NA	76.9	0.193	0.5	ng/wet g	88.5	1.62	85	50 - 150%	PASS	7	25	PASS	
4,4'-DDMU	NA	78.6	1	5	ng/wet g	88.5	0	89	50 - 150%	PASS	8	25	PASS	
4,4'-DDT	NA	85.8	0.128	0.5	ng/wet g	88.5	0	97	50 - 150%	PASS	10	25	PASS	
Aldrin	NA	91.6	0.25	0.5	ng/wet g	88.5	0	104	50 - 150%	PASS	15	25	PASS	
BHC-alpha	NA	99.9	0.25	0.5	ng/wet g	88.5	0	113	50 - 150%	PASS	10	25	PASS	
BHC-beta	NA	95.7	0.25	0.5	ng/wet g	88.5	0	108	50 - 150%	PASS	5	25	PASS	
BHC-gamma	NA	103	0.25	0.5	ng/wet g	88.5	0	116	50 - 150%	PASS	8	25	PASS	
Chlordane-alpha	NA	74.6	0.187	0.5	ng/wet g	88.5	0	84	50 - 150%	PASS	7	25	PASS	
Chlordane-gamma	NA	79.7	0.179	0.5	ng/wet g	88.5	0	90	50 - 150%	PASS	9	25	PASS	
cis-Nonachlor	NA	74.6	0.192	0.5	ng/wet g	88.5	0	84	50 - 150%	PASS	2	25	PASS	
DCPA (Dacthal)	NA	92.6	5	10	ng/wet g	88.5	0	105	50 - 150%	PASS	9	25	PASS	
Dicofol	NA	129	1	5	ng/wet g	88.5	0	146	50 - 150%	PASS	2	25	PASS	
Dieldrin	NA	83.3	0.1	0.2	ng/wet g	88.5	0	94	50 - 150%	PASS	0	25	PASS	
Endosulfan Sulfate	NA	86.1	0.25	0.5	ng/wet g	88.5	0	97	50 - 150%	PASS	6	25	PASS	
Endosulfan-I	NA	57.2	0.25	0.5	ng/wet g	88.5	0	65	50 - 150%	PASS	6	25	PASS	
Endosulfan-II	NA	63.5	0.25	0.5	ng/wet g	88.5	0	72	50 - 150%	PASS	13	25	PASS	
Endrin	NA	116	0.25	0.5	ng/wet g	88.5	0	131	50 - 150%	PASS	2	25	PASS	
Endrin Aldehyde	NA	36.6	0.25	0.5	ng/wet g	88.5	0	41	50 - 150%	FAIL	10	25	PASS	1,Q
Endrin Ketone	NA	95.6	0.25	0.5	ng/wet g	88.5	0	108	50 - 150%	PASS	8	25	PASS	
Heptachlor	NA	125	0.25	0.5	ng/wet g	88.5	0	141	50 - 150%	PASS	5	25	PASS	
Heptachlor Epoxide	NA	96.9	0.25	0.5	ng/wet g	88.5	0	109	50 - 150%	PASS	10	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	117	0.25	0.5	ng/wet g	88.5	0	132	50 - 150%	PASS	8	25	PASS	
Mirex	NA	74.7	0.25	0.5	ng/wet g	88.5	0	84	50 - 150%	PASS	7	25	PASS	
Oxychlordane	NA	85.1	0.25	0.5	ng/wet g	88.5	0	96	50 - 150%	PASS	4	25	PASS	
Perthane	NA	99.1	5	10	ng/wet g	88.5	0	112	50 - 150%	PASS	7	25	PASS	
trans-Nonachlor	NA	76.6	0.186	0.5	ng/wet g	88.5	0.244	86	50 - 150%	PASS	5	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-R2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19		
(PCB030)	NA	90			% Recovery	100	90	51 - 137%	PASS		14	30	PASS
(PCB112)	NA	76			% Recovery	100	76	53 - 150%	PASS		13	30	PASS
(PCB198)	NA	86			% Recovery	100	86	25 - 146%	PASS		15	30	PASS
(TCMX)	NA	88			% Recovery	100	88	50 - 144%	PASS		19	30	PASS
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g						0	25	PASS
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g						0	25	PASS
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g						0	25	PASS
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g						0	25	PASS
4,4'-DDE	NA	1.52	0.193	0.5	ng/wet g						13	25	PASS
4,4'-DDMU	NA	ND	1	5	ng/wet g						0	25	PASS
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g						0	25	PASS
Aldrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
BHC-alpha	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
BHC-beta	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
BHC-gamma	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g						0	25	PASS
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g						0	25	PASS
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g						0	25	PASS
DCPA (Dacthal)	NA	ND	5	10	ng/wet g						0	25	PASS
Dicofol	NA	ND	1	5	ng/wet g						0	25	PASS
Dieldrin	NA	ND	0.1	0.2	ng/wet g						0	25	PASS
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Heptachlor	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g						0	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
Mirex	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
Oxychlordane	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
Perthane	NA	ND	5	10	ng/wet g					0	25	PASS	
trans-Nonachlor	NA	0.203	0.186	0.5	ng/wet g					34	25	FAIL	J,SL

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-MS1	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19			Analyzed: 06-Jun-19		
(PCB030)	NA	109			% Recovery	100	0	109	51 - 137% PASS			
(PCB112)	NA	119			% Recovery	100	0	119	53 - 150% PASS			
(PCB198)	NA	100			% Recovery	100	0	100	25 - 146% PASS			
(TCMX)	NA	107			% Recovery	100	0	107	50 - 144% PASS			
2,4'-DDD	NA	133	0.267	0.5	ng/wet g	96.1	0	138	50 - 150% PASS			
2,4'-DDE	NA	93.3	0.2	0.5	ng/wet g	96.1	0	97	50 - 150% PASS			
2,4'-DDT	NA	106	0.194	0.5	ng/wet g	96.1	0	110	50 - 150% PASS			
4,4'-DDD	NA	134	0.198	0.5	ng/wet g	96.1	0	139	50 - 150% PASS			
4,4'-DDE	NA	101	0.193	0.5	ng/wet g	96.1	4.25	101	50 - 150% PASS			
4,4'-DDMU	NA	99.2	1	5	ng/wet g	96.1	0	103	50 - 150% PASS			
4,4'-DDT	NA	122	0.128	0.5	ng/wet g	96.1	0	127	50 - 150% PASS			
Aldrin	NA	90.6	0.25	0.5	ng/wet g	96.1	0	94	50 - 150% PASS			
BHC-alpha	NA	97.9	0.25	0.5	ng/wet g	96.1	0	102	50 - 150% PASS			
BHC-beta	NA	82.4	0.25	0.5	ng/wet g	96.1	0	86	50 - 150% PASS			
BHC-gamma	NA	105	0.25	0.5	ng/wet g	96.1	0	109	50 - 150% PASS			
Chlordane-alpha	NA	95.8	0.187	0.5	ng/wet g	96.1	0	100	50 - 150% PASS			
Chlordane-gamma	NA	93.9	0.179	0.5	ng/wet g	96.1	0	98	50 - 150% PASS			
cis-Nonachlor	NA	89.6	0.192	0.5	ng/wet g	96.1	0	93	50 - 150% PASS			
DCPA (Dacthal)	NA	93.5	5	10	ng/wet g	96.1	0	97	50 - 150% PASS			
Dicofol	NA	216	1	5	ng/wet g	96.1	0	225	50 - 150% FAIL			1,M
Dieldrin	NA	107	0.1	0.2	ng/wet g	96.1	0	111	50 - 150% PASS			
Endosulfan Sulfate	NA	110	0.25	0.5	ng/wet g	96.1	0	114	50 - 150% PASS			
Endosulfan-I	NA	79.6	0.25	0.5	ng/wet g	96.1	0	83	50 - 150% PASS			
Endosulfan-II	NA	57.3	0.25	0.5	ng/wet g	96.1	0	60	50 - 150% PASS			
Endrin	NA	112	0.25	0.5	ng/wet g	96.1	0	117	50 - 150% PASS			
Endrin Aldehyde	NA	42.1	0.25	0.5	ng/wet g	96.1	0	44	50 - 150% FAIL			1,Q
Endrin Ketone	NA	106	0.25	0.5	ng/wet g	96.1	0	110	50 - 150% PASS			
Heptachlor	NA	144	0.25	0.5	ng/wet g	96.1	0	150	50 - 150% PASS			
Heptachlor Epoxide	NA	110	0.25	0.5	ng/wet g	96.1	0	114	50 - 150% PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62345-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14126			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g									
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15151			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g									
Sample ID: 62345-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14126			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.27	0.025	0.05	µg/wet g	2	0	113	75 - 125%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15151			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	1020	1E-05	0.00002	µg/wet g	1000	0	102	75 - 125%	PASS				
Sample ID: 62345-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14126			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.29	0.025	0.05	µg/wet g	2	0	114	75 - 125%	PASS	0	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15151			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	1030	1E-05	0.00002	µg/wet g	1000	0	103	75 - 125%	PASS	1	25	PASS	
Sample ID: 62346-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14127			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g									
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15152			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g									
Sample ID: 62346-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14127			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.17	0.025	0.05	µg/wet g	2	0	109	75 - 125%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15152			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	1050	1E-05	0.00002	µg/wet g	1000	0	105	75 - 125%	PASS				
Sample ID: 62346-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14127			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.2	0.025	0.05	µg/wet g	2	0	110	75 - 125%	PASS	2	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15152			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	1010	1E-05	0.00002	µg/wet g	1000	0	101	75 - 125%	PASS	4	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62347-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g									
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g									
Sample ID: 62347-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.2	0.025	0.05	µg/wet g	2	0	110	75 - 125%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	979	1E-05	0.00002	µg/wet g	1000	0	98	75 - 125%	PASS				
Sample ID: 62347-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.21	0.025	0.05	µg/wet g	2	0	111	75 - 125%	PASS	0	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	956	1E-05	0.00002	µg/wet g	1000	0	96	75 - 125%	PASS	2	25	PASS	
Sample ID: 62348-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14126			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.18	0.025	0.05	µg/dry g	2.06		106	70 - 130%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15151			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.0324	1E-05	0.00002	µg/dry g	0.0371		87	70 - 130%	PASS				
Sample ID: 62349-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14127			Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	2.09	0.025	0.05	µg/dry g	2.06		101	70 - 130%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15152			Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.0352	1E-05	0.00002	µg/dry g	0.0371		95	70 - 130%	PASS				
Sample ID: 62350-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	1.92	0.025	0.05	µg/dry g	2.06		93	70 - 130%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	0.0345	1E-05	0.00002	µg/dry g	0.0371		93	70 - 130%	PASS				

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62351-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**		
Dilution Factor: 1		Method: EPA 6020				Batch ID: E-14129		Prepared: 24-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	1.95	0.025	0.05	µg/dry g	2.06		95	70 - 130%	PASS				
Dilution Factor: 1		Method: EPA 245.7				Batch ID: E-15154		Prepared: 24-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	0.0354	1E-05	0.00002	µg/dry g	0.0371		95	70 - 130%	PASS				
Sample ID: 62352-CRM1	**QAQC CRM - SRM 1566b**				**Matrix: Tissue**			**Sampled:**				**Received:**		
Dilution Factor: 1		Method: EPA 6020				Batch ID: E-14130		Prepared: 25-May-19				Analyzed: 31-May-19		
Selenium (Se)	NA	1.94	0.025	0.05	µg/dry g	2.06		94	70 - 130%	PASS				
Dilution Factor: 1		Method: EPA 245.7				Batch ID: E-15155		Prepared: 25-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	0.0386	1E-05	0.00002	µg/dry g	0.0371		104	70 - 130%	PASS				
Sample ID: 62357-MS1	**C1_91202SDSBBOG18BKC Black Croaker**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
Dilution Factor: 1		Method: EPA 6020				Batch ID: E-14126		Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	56.8	0.025	0.05	µg/wet g	48.6	2.3	112	75 - 125%	PASS				
Dilution Factor: 1		Method: EPA 245.7				Batch ID: E-15151		Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	2.95	1E-05	0.00002	µg/wet g	0.612	2.31	105	75 - 125%	PASS				
Sample ID: 62357-MS2	**C1_91202SDSBBOG18BKC Black Croaker**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
Dilution Factor: 1		Method: EPA 6020				Batch ID: E-14126		Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	56.7	0.025	0.05	µg/wet g	49	2.3	111	75 - 125%	PASS	1	25	PASS	
Dilution Factor: 1		Method: EPA 245.7				Batch ID: E-15151		Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	2.94	1E-05	0.00002	µg/wet g	0.612	2.31	103	75 - 125%	PASS	2	25	PASS	
Sample ID: 62357-R2	**C1_91202SDSBBOG18BKC Black Croaker**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
Dilution Factor: 1		Method: EPA 6020				Batch ID: E-14126		Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	0.461945	0.025	0.05	µg/wet g						2	25	PASS	
Dilution Factor: 1		Method: EPA 245.7				Batch ID: E-15151		Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	0.46805	1E-05	0.00002	µg/wet g						1	25	PASS	
Sample ID: 62367-MS1	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
Dilution Factor: 1		Method: EPA 6020				Batch ID: E-14127		Prepared: 23-May-19				Analyzed: 30-May-19		
Selenium (Se)	NA	44	0.025	0.05	µg/wet g	43	0.83	100	75 - 125%	PASS				
Dilution Factor: 1		Method: EPA 245.7				Batch ID: E-15152		Prepared: 23-May-19				Analyzed: 04-Jun-19		
Mercury (Hg)	NA	5.42	1E-05	0.00002	µg/wet g	0.537	4.73	128	75 - 125%	FAIL				Q

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14127			Prepared: 23-May-19				Analyzed: 30-May-19	
Selenium (Se)	NA	42.8	0.025	0.05	µg/wet g	43	0.83	98	75 - 125%	PASS	2	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15152			Prepared: 23-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	5.37	1E-05	0.00002	µg/wet g	0.537	4.73	119	75 - 125%	PASS	7	25 PASS	
Sample ID: 62367-R2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14127			Prepared: 23-May-19				Analyzed: 30-May-19	
Selenium (Se)	NA	0.183015	0.025	0.05	µg/wet g						1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15152			Prepared: 23-May-19				Analyzed: 04-Jun-19	
Mercury (Hg)	NA	1.033471	1E-05	0.00002	µg/wet g						3	25 PASS	
Sample ID: 62377-MS1	**C1_91203SDNBBOG18QEF Queen fish**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19	
Selenium (Se)	NA	53.3	0.025	0.05	µg/wet g	50.1	0.836	105	75 - 125%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	1.52	1E-05	0.00002	µg/wet g	0.626	0.947	92	75 - 125%	PASS			
Sample ID: 62377-MS2	**C1_91203SDNBBOG18QEF Queen fish**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19	
Selenium (Se)	NA	56.7	0.025	0.05	µg/wet g	50.1	0.836	112	75 - 125%	PASS	6	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	1.51	1E-05	0.00002	µg/wet g	0.626	0.947	90	75 - 125%	PASS	2	25 PASS	
Sample ID: 62377-R2	**C1_91203SDNBBOG18QEF Queen fish**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14128			Prepared: 24-May-19				Analyzed: 30-May-19	
Selenium (Se)	NA	0.172125	0.025	0.05	µg/wet g						1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15153			Prepared: 23-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	0.196362	1E-05	0.00002	µg/wet g						2	25 PASS	
Sample ID: 62387-MS1	**C1_90606MISSBOG18YFC Yellowfin Cro**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14129			Prepared: 24-May-19				Analyzed: 31-May-19	
Selenium (Se)	NA	40.9	0.025	0.05	µg/wet g	38.2	1.28	104	75 - 125%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15154			Prepared: 24-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	1.31	1E-05	0.00002	µg/wet g	0.478	0.857	95	75 - 125%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62387-MS2	**C1_90606MISSBOG18YFC Yellowfin Cro**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14129			Prepared: 24-May-19				Analyzed: 31-May-19	
Selenium (Se)	NA	40.6	0.025	0.05	µg/wet g	38.2	1.28	103	75 - 125%	PASS	1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15154			Prepared: 24-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	1.34	1E-05	0.00002	µg/wet g	0.478	0.857	101	75 - 125%	PASS	6	25 PASS	
Sample ID: 62387-R2	**C1_90606MISSBOG18YFC Yellowfin Cro**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14129			Prepared: 24-May-19				Analyzed: 31-May-19	
Selenium (Se)	NA	0.274432	0.025	0.05	µg/wet g						1	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15154			Prepared: 24-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	0.183312	1E-05	0.00002	µg/wet g						1	25 PASS	
Sample ID: 62397-MS1	**C1_90208OCNHBOG18SSB Spotted San**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14130			Prepared: 25-May-19				Analyzed: 31-May-19	
Selenium (Se)	NA	41.3	0.025	0.05	µg/wet g	39.9	1.15	101	75 - 125%	PASS			
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15155			Prepared: 25-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	0.879	1E-05	0.00002	µg/wet g	0.499	0.374	101	75 - 125%	PASS			
Sample ID: 62397-MS2	**C1_90208OCNHBOG18SSB Spotted San**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14130			Prepared: 25-May-19				Analyzed: 31-May-19	
Selenium (Se)	NA	41.4	0.025	0.05	µg/wet g	39.9	1.15	101	75 - 125%	PASS	0	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15155			Prepared: 25-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	0.894	1E-05	0.00002	µg/wet g	0.499	0.374	104	75 - 125%	PASS	3	25 PASS	
Sample ID: 62397-R2	**C1_90208OCNHBOG18SSB Spotted San**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14130			Prepared: 25-May-19				Analyzed: 31-May-19	
Selenium (Se)	NA	0.268096	0.025	0.05	µg/wet g						5	25 PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15155			Prepared: 25-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	0.08361	1E-05	0.00002	µg/wet g						3	25 PASS	
Sample ID: 63651-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**	
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14129			Prepared: 24-May-19				Analyzed: 30-May-19	
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g								
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15154			Prepared: 24-May-19				Analyzed: 05-Jun-19	
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g								

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Elements — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 63651-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14129			Prepared: 24-May-19				Analyzed: 31-May-19		
Selenium (Se)	NA	2.13	0.025	0.05	µg/wet g	2	0	107	75 - 125%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15154			Prepared: 24-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	997	1E-05	0.00002	µg/wet g	1000	0	100	75 - 125%	PASS				
Sample ID: 63651-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14129			Prepared: 24-May-19				Analyzed: 31-May-19		
Selenium (Se)	NA	2.11	0.025	0.05	µg/wet g	2	0	105	75 - 125%	PASS	2	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15154			Prepared: 24-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	998	1E-05	0.00002	µg/wet g	1000	0	100	75 - 125%	PASS	0	25	PASS	
Sample ID: 63652-B1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14130			Prepared: 25-May-19				Analyzed: 31-May-19		
Selenium (Se)	NA	ND	0.025	0.05	µg/wet g									
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15155			Prepared: 25-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	ND	1E-05	0.00002	µg/wet g									
Sample ID: 63652-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14130			Prepared: 25-May-19				Analyzed: 31-May-19		
Selenium (Se)	NA	2.17	0.025	0.05	µg/wet g	2	0	109	75 - 125%	PASS				
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15155			Prepared: 25-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	998	1E-05	0.00002	µg/wet g	1000	0	100	75 - 125%	PASS				
Sample ID: 63652-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
Dilution Factor: 1	Method: EPA 6020				Batch ID: E-14130			Prepared: 25-May-19				Analyzed: 31-May-19		
Selenium (Se)	NA	2.14	0.025	0.05	µg/wet g	2	0	107	75 - 125%	PASS	1	25	PASS	
Dilution Factor: 1	Method: EPA 245.7				Batch ID: E-15155			Prepared: 25-May-19				Analyzed: 05-Jun-19		
Mercury (Hg)	NA	996	1E-05	0.00002	µg/wet g	1000	0	100	75 - 125%	PASS	0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	152	0.25	0.5	ng/wet g	96.1	0	158	50 - 150%	FAIL			1,M
Mirex	NA	81.8	0.25	0.5	ng/wet g	96.1	0	85	50 - 150%	PASS			
Oxychlordane	NA	85.1	0.25	0.5	ng/wet g	96.1	0	89	50 - 150%	PASS			
Perthane	NA	157	5	10	ng/wet g	96.1	0	163	50 - 150%	FAIL			1,M
trans-Nonachlor	NA	98.9	0.186	0.5	ng/wet g	96.1	0	103	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62390-MS2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068			Prepared: 08-May-19				Analyzed: 06-Jun-19		
(PCB030)	NA	110			% Recovery	100	0	110	51 - 137%	PASS	1	30	PASS	
(PCB112)	NA	116			% Recovery	100	0	116	53 - 150%	PASS	3	30	PASS	
(PCB198)	NA	111			% Recovery	100	0	111	25 - 146%	PASS	10	30	PASS	
(TCMX)	NA	108			% Recovery	100	0	108	50 - 144%	PASS	1	30	PASS	
2,4'-DDD	NA	121	0.267	0.5	ng/wet g	90	0	134	50 - 150%	PASS	3	25	PASS	
2,4'-DDE	NA	85	0.2	0.5	ng/wet g	90	0	94	50 - 150%	PASS	3	25	PASS	
2,4'-DDT	NA	105	0.194	0.5	ng/wet g	90	0	117	50 - 150%	PASS	6	25	PASS	
4,4'-DDD	NA	125	0.198	0.5	ng/wet g	90	0	139	50 - 150%	PASS	0	25	PASS	
4,4'-DDE	NA	94	0.193	0.5	ng/wet g	90	4.25	100	50 - 150%	PASS	1	25	PASS	
4,4'-DDMU	NA	89.5	1	5	ng/wet g	90	0	99	50 - 150%	PASS	4	25	PASS	
4,4'-DDT	NA	126	0.128	0.5	ng/wet g	90	0	140	50 - 150%	PASS	10	25	PASS	
Aldrin	NA	84.3	0.25	0.5	ng/wet g	90	0	94	50 - 150%	PASS	0	25	PASS	
BHC-alpha	NA	93.1	0.25	0.5	ng/wet g	90	0	103	50 - 150%	PASS	1	25	PASS	
BHC-beta	NA	81.8	0.25	0.5	ng/wet g	90	0	91	50 - 150%	PASS	6	25	PASS	
BHC-gamma	NA	104	0.25	0.5	ng/wet g	90	0	116	50 - 150%	PASS	6	25	PASS	
Chlordane-alpha	NA	87.6	0.187	0.5	ng/wet g	90	0	97	50 - 150%	PASS	3	25	PASS	
Chlordane-gamma	NA	84.2	0.179	0.5	ng/wet g	90	0	94	50 - 150%	PASS	4	25	PASS	
cis-Nonachlor	NA	84.8	0.192	0.5	ng/wet g	90	0	94	50 - 150%	PASS	1	25	PASS	
DCPA (Dacthal)	NA	92	5	10	ng/wet g	90	0	102	50 - 150%	PASS	5	25	PASS	
Dicofol	NA	199	1	5	ng/wet g	90	0	221	50 - 150%	FAIL	2	25	PASS	1,M
Dieldrin	NA	95.8	0.1	0.2	ng/wet g	90	0	106	50 - 150%	PASS	5	25	PASS	
Endosulfan Sulfate	NA	106	0.25	0.5	ng/wet g	90	0	118	50 - 150%	PASS	3	25	PASS	
Endosulfan-I	NA	64.4	0.25	0.5	ng/wet g	90	0	72	50 - 150%	PASS	14	25	PASS	
Endosulfan-II	NA	57.6	0.25	0.5	ng/wet g	90	0	64	50 - 150%	PASS	6	25	PASS	
Endrin	NA	108	0.25	0.5	ng/wet g	90	0	120	50 - 150%	PASS	3	25	PASS	
Endrin Aldehyde	NA	43.3	0.25	0.5	ng/wet g	90	0	48	50 - 150%	FAIL	9	25	PASS	1,Q
Endrin Ketone	NA	112	0.25	0.5	ng/wet g	90	0	124	50 - 150%	PASS	12	25	PASS	
Heptachlor	NA	139	0.25	0.5	ng/wet g	90	0	154	50 - 150%	FAIL	3	25	PASS	1,M
Heptachlor Epoxide	NA	110	0.25	0.5	ng/wet g	90	0	122	50 - 150%	PASS	7	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Methoxychlor	NA	157	0.25	0.5	ng/wet g	90	0	174	50 - 150%	FAIL	10	25	PASS	1,M
Mirex	NA	82.1	0.25	0.5	ng/wet g	90	0	91	50 - 150%	PASS	7	25	PASS	
Oxychlordane	NA	88.8	0.25	0.5	ng/wet g	90	0	99	50 - 150%	PASS	11	25	PASS	
Perthane	NA	148	5	10	ng/wet g	90	0	164	50 - 150%	FAIL	1	25	PASS	1,M
trans-Nonachlor	NA	90.6	0.186	0.5	ng/wet g	90	0	101	50 - 150%	PASS	2	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-R2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068			Prepared: 08-May-19			Analyzed: 06-Jun-19		
(PCB030)	NA	100			% Recovery	100	100	51 - 137%	PASS		4	30	PASS
(PCB112)	NA	103			% Recovery	100	103	53 - 150%	PASS		4	30	PASS
(PCB198)	NA	107			% Recovery	100	107	25 - 146%	PASS		1	30	PASS
(TCMX)	NA	97			% Recovery	100	97	50 - 144%	PASS		3	30	PASS
2,4'-DDD	NA	ND	0.267	0.5	ng/wet g						0	25	PASS
2,4'-DDE	NA	ND	0.2	0.5	ng/wet g						0	25	PASS
2,4'-DDT	NA	ND	0.194	0.5	ng/wet g						0	25	PASS
4,4'-DDD	NA	ND	0.198	0.5	ng/wet g						0	25	PASS
4,4'-DDE	NA	3.84	0.193	0.5	ng/wet g						19	25	PASS
4,4'-DDMU	NA	ND	1	5	ng/wet g						0	25	PASS
4,4'-DDT	NA	ND	0.128	0.5	ng/wet g						0	25	PASS
Aldrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
BHC-alpha	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
BHC-beta	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
BHC-gamma	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Chlordane-alpha	NA	ND	0.187	0.5	ng/wet g						0	25	PASS
Chlordane-gamma	NA	ND	0.179	0.5	ng/wet g						0	25	PASS
cis-Nonachlor	NA	ND	0.192	0.5	ng/wet g						0	25	PASS
DCPA (Dacthal)	NA	ND	5	10	ng/wet g						0	25	PASS
Dicofol	NA	ND	1	5	ng/wet g						0	25	PASS
Dieldrin	NA	ND	0.1	0.2	ng/wet g						0	25	PASS
Endosulfan Sulfate	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endosulfan-I	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endosulfan-II	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endrin	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endrin Aldehyde	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Endrin Ketone	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Heptachlor	NA	ND	0.25	0.5	ng/wet g						0	25	PASS
Heptachlor Epoxide	NA	ND	0.25	0.5	ng/wet g						0	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Chlorinated Pesticides — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Methoxychlor	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Mirex	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Oxychlordane	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
Perthane	NA	ND	5	10	ng/wet g					0	25 PASS	
trans-Nonachlor	NA	ND	0.186	0.5	ng/wet g					0	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19			Analyzed: 11-May-19		
PCB003	NA	ND	0.25	0.5	ng/wet g							
PCB005	NA	ND	0.25	0.5	ng/wet g							
PCB008	NA	ND	0.017	0.5	ng/wet g							
PCB015	NA	ND	0.25	0.5	ng/wet g							
PCB018	NA	ND	0.029	0.5	ng/wet g							
PCB027	NA	ND	0.25	0.5	ng/wet g							
PCB028	NA	ND	0.023	0.5	ng/wet g							
PCB029	NA	ND	0.25	0.5	ng/wet g							
PCB031	NA	ND	0.25	0.5	ng/wet g							
PCB033	NA	ND	0.25	0.5	ng/wet g							
PCB037	NA	ND	0.06	0.5	ng/wet g							
PCB044	NA	ND	0.028	0.5	ng/wet g							
PCB049	NA	ND	0.036	0.5	ng/wet g							
PCB052	NA	ND	0.012	0.5	ng/wet g							
PCB056(060)	NA	ND	0.25	0.5	ng/wet g							
PCB066	NA	ND	0.027	0.5	ng/wet g							
PCB070	NA	ND	0.023	0.5	ng/wet g							
PCB074	NA	ND	0.021	0.5	ng/wet g							
PCB077	NA	ND	0.018	0.5	ng/wet g							
PCB081	NA	ND	0.084	0.5	ng/wet g							
PCB087	NA	ND	0.081	0.5	ng/wet g							
PCB095	NA	ND	0.25	0.5	ng/wet g							
PCB097	NA	ND	0.25	0.5	ng/wet g							
PCB099	NA	ND	0.028	0.5	ng/wet g							
PCB101	NA	ND	0.027	0.5	ng/wet g							
PCB105	NA	ND	0.047	0.5	ng/wet g							
PCB110	NA	ND	0.074	0.5	ng/wet g							
PCB114	NA	ND	0.072	0.5	ng/wet g							
PCB118	NA	ND	0.069	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g							
PCB123	NA	ND	0.018	0.5	ng/wet g							
PCB126	NA	ND	0.086	0.5	ng/wet g							
PCB128	NA	ND	0.081	0.5	ng/wet g							
PCB137	NA	ND	0.25	0.5	ng/wet g							
PCB138	NA	ND	0.057	0.5	ng/wet g							
PCB141	NA	ND	0.25	0.5	ng/wet g							
PCB149	NA	ND	0.092	0.5	ng/wet g							
PCB151	NA	ND	0.073	0.5	ng/wet g							
PCB153	NA	ND	0.065	0.5	ng/wet g							
PCB156	NA	ND	0.089	0.5	ng/wet g							
PCB157	NA	ND	0.103	0.5	ng/wet g							
PCB158	NA	ND	0.074	0.5	ng/wet g							
PCB167	NA	ND	0.049	0.5	ng/wet g							
PCB168+132	NA	ND	0.094	0.5	ng/wet g							
PCB169	NA	ND	0.116	0.5	ng/wet g							
PCB170	NA	ND	0.118	0.5	ng/wet g							
PCB174	NA	ND	0.25	0.5	ng/wet g							
PCB177	NA	ND	0.085	0.5	ng/wet g							
PCB180	NA	ND	0.154	0.5	ng/wet g							
PCB183	NA	ND	0.056	0.5	ng/wet g							
PCB187	NA	ND	0.168	0.5	ng/wet g							
PCB189	NA	ND	0.109	0.5	ng/wet g							
PCB194	NA	ND	0.164	0.5	ng/wet g							
PCB195	NA	ND	0.093	0.5	ng/wet g							
PCB199(200)	NA	ND	0.25	0.5	ng/wet g							
PCB201	NA	ND	0.104	0.5	ng/wet g							
PCB203	NA	ND	0.25	0.5	ng/wet g							
PCB206	NA	ND	0.155	0.5	ng/wet g							
PCB209	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
PCB003	NA	44.1	0.25	0.5	ng/wet g	50	0	88	50 - 150%		PASS	
PCB005	NA	45.2	0.25	0.5	ng/wet g	50	0	90	50 - 150%		PASS	
PCB008	NA	51.5	0.017	0.5	ng/wet g	50	0	103	50 - 150%		PASS	
PCB015	NA	48.4	0.25	0.5	ng/wet g	50	0	97	50 - 150%		PASS	
PCB018	NA	46.4	0.029	0.5	ng/wet g	50	0	93	50 - 150%		PASS	
PCB027	NA	45.4	0.25	0.5	ng/wet g	50	0	91	50 - 150%		PASS	
PCB028	NA	48.7	0.023	0.5	ng/wet g	50	0	97	50 - 150%		PASS	
PCB029	NA	46.2	0.25	0.5	ng/wet g	50	0	92	50 - 150%		PASS	
PCB031	NA	45.9	0.25	0.5	ng/wet g	50	0	92	50 - 150%		PASS	
PCB033	NA	48	0.25	0.5	ng/wet g	50	0	96	50 - 150%		PASS	
PCB037	NA	47.1	0.06	0.5	ng/wet g	50	0	94	50 - 150%		PASS	
PCB044	NA	49.4	0.028	0.5	ng/wet g	50	0	99	50 - 150%		PASS	
PCB049	NA	46.1	0.036	0.5	ng/wet g	50	0	92	50 - 150%		PASS	
PCB052	NA	48.2	0.012	0.5	ng/wet g	50	0	96	50 - 150%		PASS	
PCB056(060)	NA	48.1	0.25	0.5	ng/wet g	50	0	96	50 - 150%		PASS	
PCB066	NA	47.3	0.027	0.5	ng/wet g	50	0	95	50 - 150%		PASS	
PCB070	NA	49.4	0.023	0.5	ng/wet g	50	0	99	50 - 150%		PASS	
PCB074	NA	47.8	0.021	0.5	ng/wet g	50	0	96	50 - 150%		PASS	
PCB077	NA	45.9	0.018	0.5	ng/wet g	50	0	92	50 - 150%		PASS	
PCB081	NA	49.1	0.084	0.5	ng/wet g	50	0	98	50 - 150%		PASS	
PCB087	NA	45.4	0.081	0.5	ng/wet g	50	0	91	50 - 150%		PASS	
PCB095	NA	47.2	0.25	0.5	ng/wet g	50	0	94	50 - 150%		PASS	
PCB097	NA	50.1	0.25	0.5	ng/wet g	50	0	100	50 - 150%		PASS	
PCB099	NA	49.2	0.028	0.5	ng/wet g	50	0	98	50 - 150%		PASS	
PCB101	NA	47.6	0.027	0.5	ng/wet g	50	0	95	50 - 150%		PASS	
PCB105	NA	45.9	0.047	0.5	ng/wet g	50	0	92	50 - 150%		PASS	
PCB110	NA	47.3	0.074	0.5	ng/wet g	50	0	95	50 - 150%		PASS	
PCB114	NA	48.3	0.072	0.5	ng/wet g	50	0	97	50 - 150%		PASS	
PCB118	NA	49.5	0.069	0.5	ng/wet g	50	0	99	50 - 150%		PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	45.5	0.071	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB123	NA	44.7	0.018	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB126	NA	49.7	0.086	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB128	NA	46.4	0.081	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB137	NA	49.1	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB138	NA	46	0.057	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB141	NA	44.6	0.25	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB149	NA	46.9	0.092	0.5	ng/wet g	50	0	94	50 - 150%	PASS			
PCB151	NA	49.5	0.073	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB153	NA	44.6	0.065	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB156	NA	47.5	0.089	0.5	ng/wet g	50	0	95	50 - 150%	PASS			
PCB157	NA	45.8	0.103	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB158	NA	46.1	0.074	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB167	NA	50.8	0.049	0.5	ng/wet g	50	0	102	50 - 150%	PASS			
PCB168+132	NA	93.6	0.094	0.5	ng/wet g	100	0	94	50 - 150%	PASS			
PCB169	NA	49.4	0.116	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB170	NA	45.6	0.118	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB174	NA	47.7	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS			
PCB177	NA	51.4	0.085	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB180	NA	48	0.154	0.5	ng/wet g	50	0	96	50 - 150%	PASS			
PCB183	NA	48.9	0.056	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB187	NA	45.9	0.168	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB189	NA	48.5	0.109	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB194	NA	51.9	0.164	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB195	NA	46.7	0.093	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB199(200)	NA	45.6	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB201	NA	46.4	0.104	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB203	NA	45.8	0.25	0.5	ng/wet g	50	0	92	50 - 150%	PASS			
PCB206	NA	44.5	0.155	0.5	ng/wet g	50	0	89	50 - 150%	PASS			
PCB209	NA	44.8	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62345-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 11-May-19		
PCB003	NA	44.8	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS	2	25	PASS	
PCB005	NA	47.8	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	6	25	PASS	
PCB008	NA	50	0.017	0.5	ng/wet g	50	0	100	50 - 150%	PASS	3	25	PASS	
PCB015	NA	51.8	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS	7	25	PASS	
PCB018	NA	47.4	0.029	0.5	ng/wet g	50	0	95	50 - 150%	PASS	2	25	PASS	
PCB027	NA	46.5	0.25	0.5	ng/wet g	50	0	93	50 - 150%	PASS	2	25	PASS	
PCB028	NA	49.8	0.023	0.5	ng/wet g	50	0	100	50 - 150%	PASS	3	25	PASS	
PCB029	NA	45.3	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS	1	25	PASS	
PCB031	NA	46.8	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS	2	25	PASS	
PCB033	NA	48.2	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	0	25	PASS	
PCB037	NA	49.3	0.06	0.5	ng/wet g	50	0	99	50 - 150%	PASS	5	25	PASS	
PCB044	NA	46.8	0.028	0.5	ng/wet g	50	0	94	50 - 150%	PASS	5	25	PASS	
PCB049	NA	46.7	0.036	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS	
PCB052	NA	49.7	0.012	0.5	ng/wet g	50	0	99	50 - 150%	PASS	3	25	PASS	
PCB056(060)	NA	49.2	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS	2	25	PASS	
PCB066	NA	47.9	0.027	0.5	ng/wet g	50	0	96	50 - 150%	PASS	1	25	PASS	
PCB070	NA	49.9	0.023	0.5	ng/wet g	50	0	100	50 - 150%	PASS	1	25	PASS	
PCB074	NA	48.8	0.021	0.5	ng/wet g	50	0	98	50 - 150%	PASS	2	25	PASS	
PCB077	NA	50.4	0.018	0.5	ng/wet g	50	0	101	50 - 150%	PASS	9	25	PASS	
PCB081	NA	49	0.084	0.5	ng/wet g	50	0	98	50 - 150%	PASS	0	25	PASS	
PCB087	NA	49.5	0.081	0.5	ng/wet g	50	0	99	50 - 150%	PASS	8	25	PASS	
PCB095	NA	46.7	0.25	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS	
PCB097	NA	48.2	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	4	25	PASS	
PCB099	NA	47.2	0.028	0.5	ng/wet g	50	0	94	50 - 150%	PASS	4	25	PASS	
PCB101	NA	47.8	0.027	0.5	ng/wet g	50	0	96	50 - 150%	PASS	1	25	PASS	
PCB105	NA	46.3	0.047	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS	
PCB110	NA	47.4	0.074	0.5	ng/wet g	50	0	95	50 - 150%	PASS	0	25	PASS	
PCB114	NA	48.1	0.072	0.5	ng/wet g	50	0	96	50 - 150%	PASS	1	25	PASS	
PCB118	NA	49.2	0.069	0.5	ng/wet g	50	0	98	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	45	0.071	0.5	ng/wet g	50	0	90	50 - 150%	PASS	1	25	PASS	
PCB123	NA	47.9	0.018	0.5	ng/wet g	50	0	96	50 - 150%	PASS	8	25	PASS	
PCB126	NA	49.9	0.086	0.5	ng/wet g	50	0	100	50 - 150%	PASS	1	25	PASS	
PCB128	NA	45.1	0.081	0.5	ng/wet g	50	0	90	50 - 150%	PASS	3	25	PASS	
PCB137	NA	47	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS	4	25	PASS	
PCB138	NA	48.3	0.057	0.5	ng/wet g	50	0	97	50 - 150%	PASS	5	25	PASS	
PCB141	NA	47.2	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS	5	25	PASS	
PCB149	NA	47.2	0.092	0.5	ng/wet g	50	0	94	50 - 150%	PASS	0	25	PASS	
PCB151	NA	47.6	0.073	0.5	ng/wet g	50	0	95	50 - 150%	PASS	4	25	PASS	
PCB153	NA	48.7	0.065	0.5	ng/wet g	50	0	97	50 - 150%	PASS	9	25	PASS	
PCB156	NA	46.1	0.089	0.5	ng/wet g	50	0	92	50 - 150%	PASS	3	25	PASS	
PCB157	NA	44.9	0.103	0.5	ng/wet g	50	0	90	50 - 150%	PASS	2	25	PASS	
PCB158	NA	46.7	0.074	0.5	ng/wet g	50	0	93	50 - 150%	PASS	1	25	PASS	
PCB167	NA	50.4	0.049	0.5	ng/wet g	50	0	101	50 - 150%	PASS	1	25	PASS	
PCB168+132	NA	95.7	0.094	0.5	ng/wet g	100	0	96	50 - 150%	PASS	2	25	PASS	
PCB169	NA	48.6	0.116	0.5	ng/wet g	50	0	97	50 - 150%	PASS	2	25	PASS	
PCB170	NA	49.4	0.118	0.5	ng/wet g	50	0	99	50 - 150%	PASS	8	25	PASS	
PCB174	NA	51	0.25	0.5	ng/wet g	50	0	102	50 - 150%	PASS	7	25	PASS	
PCB177	NA	44.2	0.085	0.5	ng/wet g	50	0	88	50 - 150%	PASS	16	25	PASS	
PCB180	NA	45.6	0.154	0.5	ng/wet g	50	0	91	50 - 150%	PASS	5	25	PASS	
PCB183	NA	48.9	0.056	0.5	ng/wet g	50	0	98	50 - 150%	PASS	0	25	PASS	
PCB187	NA	47.5	0.168	0.5	ng/wet g	50	0	95	50 - 150%	PASS	3	25	PASS	
PCB189	NA	47.2	0.109	0.5	ng/wet g	50	0	94	50 - 150%	PASS	3	25	PASS	
PCB194	NA	46.1	0.164	0.5	ng/wet g	50	0	92	50 - 150%	PASS	12	25	PASS	
PCB195	NA	44.7	0.093	0.5	ng/wet g	50	0	89	50 - 150%	PASS	4	25	PASS	
PCB199(200)	NA	47.6	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	4	25	PASS	
PCB201	NA	42.3	0.104	0.5	ng/wet g	50	0	85	50 - 150%	PASS	9	25	PASS	
PCB203	NA	44.5	0.25	0.5	ng/wet g	50	0	89	50 - 150%	PASS	3	25	PASS	
PCB206	NA	44.3	0.155	0.5	ng/wet g	50	0	89	50 - 150%	PASS	0	25	PASS	
PCB209	NA	44.4	0.25	0.5	ng/wet g	50	0	89	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
PCB003	NA	ND	0.25	0.5	ng/wet g							
PCB005	NA	ND	0.25	0.5	ng/wet g							
PCB008	NA	ND	0.017	0.5	ng/wet g							
PCB015	NA	ND	0.25	0.5	ng/wet g							
PCB018	NA	ND	0.029	0.5	ng/wet g							
PCB027	NA	ND	0.25	0.5	ng/wet g							
PCB028	NA	ND	0.023	0.5	ng/wet g							
PCB029	NA	ND	0.25	0.5	ng/wet g							
PCB031	NA	ND	0.25	0.5	ng/wet g							
PCB033	NA	ND	0.25	0.5	ng/wet g							
PCB037	NA	ND	0.06	0.5	ng/wet g							
PCB044	NA	ND	0.028	0.5	ng/wet g							
PCB049	NA	ND	0.036	0.5	ng/wet g							
PCB052	NA	ND	0.012	0.5	ng/wet g							
PCB056(060)	NA	ND	0.25	0.5	ng/wet g							
PCB066	NA	ND	0.027	0.5	ng/wet g							
PCB070	NA	ND	0.023	0.5	ng/wet g							
PCB074	NA	ND	0.021	0.5	ng/wet g							
PCB077	NA	ND	0.018	0.5	ng/wet g							
PCB081	NA	ND	0.084	0.5	ng/wet g							
PCB087	NA	ND	0.081	0.5	ng/wet g							
PCB095	NA	ND	0.25	0.5	ng/wet g							
PCB097	NA	ND	0.25	0.5	ng/wet g							
PCB099	NA	ND	0.028	0.5	ng/wet g							
PCB101	NA	ND	0.027	0.5	ng/wet g							
PCB105	NA	ND	0.047	0.5	ng/wet g							
PCB110	NA	ND	0.074	0.5	ng/wet g							
PCB114	NA	ND	0.072	0.5	ng/wet g							
PCB118	NA	ND	0.069	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g							
PCB123	NA	ND	0.018	0.5	ng/wet g							
PCB126	NA	ND	0.086	0.5	ng/wet g							
PCB128	NA	ND	0.081	0.5	ng/wet g							
PCB137	NA	ND	0.25	0.5	ng/wet g							
PCB138	NA	ND	0.057	0.5	ng/wet g							
PCB141	NA	ND	0.25	0.5	ng/wet g							
PCB149	NA	ND	0.092	0.5	ng/wet g							
PCB151	NA	ND	0.073	0.5	ng/wet g							
PCB153	NA	ND	0.065	0.5	ng/wet g							
PCB156	NA	ND	0.089	0.5	ng/wet g							
PCB157	NA	ND	0.103	0.5	ng/wet g							
PCB158	NA	ND	0.074	0.5	ng/wet g							
PCB167	NA	ND	0.049	0.5	ng/wet g							
PCB168+132	NA	ND	0.094	0.5	ng/wet g							
PCB169	NA	ND	0.116	0.5	ng/wet g							
PCB170	NA	ND	0.118	0.5	ng/wet g							
PCB174	NA	ND	0.25	0.5	ng/wet g							
PCB177	NA	ND	0.085	0.5	ng/wet g							
PCB180	NA	ND	0.154	0.5	ng/wet g							
PCB183	NA	ND	0.056	0.5	ng/wet g							
PCB187	NA	ND	0.168	0.5	ng/wet g							
PCB189	NA	ND	0.109	0.5	ng/wet g							
PCB194	NA	ND	0.164	0.5	ng/wet g							
PCB195	NA	ND	0.093	0.5	ng/wet g							
PCB199(200)	NA	ND	0.25	0.5	ng/wet g							
PCB201	NA	ND	0.104	0.5	ng/wet g							
PCB203	NA	ND	0.25	0.5	ng/wet g							
PCB206	NA	ND	0.155	0.5	ng/wet g							
PCB209	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
PCB003	NA	45.2	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS		
PCB005	NA	47.8	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB008	NA	47.2	0.017	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB015	NA	50	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS		
PCB018	NA	46.2	0.029	0.5	ng/wet g	50	0	92	50 - 150%	PASS		
PCB027	NA	49.2	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB028	NA	46.9	0.023	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB029	NA	47.9	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB031	NA	49.8	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS		
PCB033	NA	51.9	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS		
PCB037	NA	49.3	0.06	0.5	ng/wet g	50	0	99	50 - 150%	PASS		
PCB044	NA	49.1	0.028	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB049	NA	50.2	0.036	0.5	ng/wet g	50	0	100	50 - 150%	PASS		
PCB052	NA	48.7	0.012	0.5	ng/wet g	50	0	97	50 - 150%	PASS		
PCB056(060)	NA	49.3	0.25	0.5	ng/wet g	50	0	99	50 - 150%	PASS		
PCB066	NA	52.3	0.027	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB070	NA	52.2	0.023	0.5	ng/wet g	50	0	104	50 - 150%	PASS		
PCB074	NA	52.4	0.021	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB077	NA	56.5	0.018	0.5	ng/wet g	50	0	113	50 - 150%	PASS		
PCB081	NA	54.4	0.084	0.5	ng/wet g	50	0	109	50 - 150%	PASS		
PCB087	NA	56	0.081	0.5	ng/wet g	50	0	112	50 - 150%	PASS		
PCB095	NA	46.8	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB097	NA	55	0.25	0.5	ng/wet g	50	0	110	50 - 150%	PASS		
PCB099	NA	51.3	0.028	0.5	ng/wet g	50	0	103	50 - 150%	PASS		
PCB101	NA	53.2	0.027	0.5	ng/wet g	50	0	106	50 - 150%	PASS		
PCB105	NA	44.7	0.047	0.5	ng/wet g	50	0	89	50 - 150%	PASS		
PCB110	NA	50.5	0.074	0.5	ng/wet g	50	0	101	50 - 150%	PASS		
PCB114	NA	53.9	0.072	0.5	ng/wet g	50	0	108	50 - 150%	PASS		
PCB118	NA	54.3	0.069	0.5	ng/wet g	50	0	109	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	53.3	0.071	0.5	ng/wet g	50	0	107	50 - 150%	PASS			
PCB123	NA	52	0.018	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB126	NA	49.9	0.086	0.5	ng/wet g	50	0	100	50 - 150%	PASS			
PCB128	NA	52.7	0.081	0.5	ng/wet g	50	0	105	50 - 150%	PASS			
PCB137	NA	45.6	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB138	NA	48.6	0.057	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB141	NA	45.3	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB149	NA	51.5	0.092	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB151	NA	54	0.073	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB153	NA	47.1	0.065	0.5	ng/wet g	50	0	94	50 - 150%	PASS			
PCB156	NA	51.3	0.089	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB157	NA	45.5	0.103	0.5	ng/wet g	50	0	91	50 - 150%	PASS			
PCB158	NA	48.3	0.074	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB167	NA	48.8	0.049	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB168+132	NA	90.7	0.094	0.5	ng/wet g	100	0	91	50 - 150%	PASS			
PCB169	NA	54.7	0.116	0.5	ng/wet g	50	0	109	50 - 150%	PASS			
PCB170	NA	46.7	0.118	0.5	ng/wet g	50	0	93	50 - 150%	PASS			
PCB174	NA	49.7	0.25	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB177	NA	51.4	0.085	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB180	NA	51	0.154	0.5	ng/wet g	50	0	102	50 - 150%	PASS			
PCB183	NA	49.2	0.056	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB187	NA	48.9	0.168	0.5	ng/wet g	50	0	98	50 - 150%	PASS			
PCB189	NA	55.2	0.109	0.5	ng/wet g	50	0	110	50 - 150%	PASS			
PCB194	NA	57.6	0.164	0.5	ng/wet g	50	0	115	50 - 150%	PASS			
PCB195	NA	52.1	0.093	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB199(200)	NA	47.5	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS			
PCB201	NA	42	0.104	0.5	ng/wet g	50	0	84	50 - 150%	PASS			
PCB203	NA	48.3	0.25	0.5	ng/wet g	50	0	97	50 - 150%	PASS			
PCB206	NA	52	0.155	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB209	NA	51.3	0.25	0.5	ng/wet g	50	0	103	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62346-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**		
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19					Analyzed: 22-May-19		
PCB003	NA	45	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS	0	25	PASS	
PCB005	NA	54	0.25	0.5	ng/wet g	50	0	108	50 - 150%	PASS	12	25	PASS	
PCB008	NA	43.3	0.017	0.5	ng/wet g	50	0	87	50 - 150%	PASS	8	25	PASS	
PCB015	NA	47.9	0.25	0.5	ng/wet g	50	0	96	50 - 150%	PASS	4	25	PASS	
PCB018	NA	51.1	0.029	0.5	ng/wet g	50	0	102	50 - 150%	PASS	10	25	PASS	
PCB027	NA	50.1	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS	2	25	PASS	
PCB028	NA	48.9	0.023	0.5	ng/wet g	50	0	98	50 - 150%	PASS	4	25	PASS	
PCB029	NA	49.9	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS	4	25	PASS	
PCB031	NA	49.3	0.25	0.5	ng/wet g	50	0	99	50 - 150%	PASS	1	25	PASS	
PCB033	NA	51.1	0.25	0.5	ng/wet g	50	0	102	50 - 150%	PASS	2	25	PASS	
PCB037	NA	52.4	0.06	0.5	ng/wet g	50	0	105	50 - 150%	PASS	6	25	PASS	
PCB044	NA	50.4	0.028	0.5	ng/wet g	50	0	101	50 - 150%	PASS	3	25	PASS	
PCB049	NA	51.4	0.036	0.5	ng/wet g	50	0	103	50 - 150%	PASS	3	25	PASS	
PCB052	NA	53.2	0.012	0.5	ng/wet g	50	0	106	50 - 150%	PASS	9	25	PASS	
PCB056(060)	NA	51.2	0.25	0.5	ng/wet g	50	0	102	50 - 150%	PASS	3	25	PASS	
PCB066	NA	53.7	0.027	0.5	ng/wet g	50	0	107	50 - 150%	PASS	2	25	PASS	
PCB070	NA	54.5	0.023	0.5	ng/wet g	50	0	109	50 - 150%	PASS	5	25	PASS	
PCB074	NA	54.8	0.021	0.5	ng/wet g	50	0	110	50 - 150%	PASS	5	25	PASS	
PCB077	NA	59.9	0.018	0.5	ng/wet g	50	0	120	50 - 150%	PASS	6	25	PASS	
PCB081	NA	57.3	0.084	0.5	ng/wet g	50	0	115	50 - 150%	PASS	5	25	PASS	
PCB087	NA	55.2	0.081	0.5	ng/wet g	50	0	110	50 - 150%	PASS	2	25	PASS	
PCB095	NA	52.5	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS	11	25	PASS	
PCB097	NA	56.6	0.25	0.5	ng/wet g	50	0	113	50 - 150%	PASS	3	25	PASS	
PCB099	NA	53.2	0.028	0.5	ng/wet g	50	0	106	50 - 150%	PASS	3	25	PASS	
PCB101	NA	53.2	0.027	0.5	ng/wet g	50	0	106	50 - 150%	PASS	0	25	PASS	
PCB105	NA	44.5	0.047	0.5	ng/wet g	50	0	89	50 - 150%	PASS	0	25	PASS	
PCB110	NA	54.3	0.074	0.5	ng/wet g	50	0	109	50 - 150%	PASS	8	25	PASS	
PCB114	NA	53.3	0.072	0.5	ng/wet g	50	0	107	50 - 150%	PASS	1	25	PASS	
PCB118	NA	55.5	0.069	0.5	ng/wet g	50	0	111	50 - 150%	PASS	2	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	54.8	0.071	0.5	ng/wet g	50	0	110	50 - 150%	PASS	3	25	PASS	
PCB123	NA	55.7	0.018	0.5	ng/wet g	50	0	111	50 - 150%	PASS	7	25	PASS	
PCB126	NA	52.6	0.086	0.5	ng/wet g	50	0	105	50 - 150%	PASS	5	25	PASS	
PCB128	NA	52.3	0.081	0.5	ng/wet g	50	0	105	50 - 150%	PASS	0	25	PASS	
PCB137	NA	47.7	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	4	25	PASS	
PCB138	NA	46.7	0.057	0.5	ng/wet g	50	0	93	50 - 150%	PASS	4	25	PASS	
PCB141	NA	47.6	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	4	25	PASS	
PCB149	NA	51.5	0.092	0.5	ng/wet g	50	0	103	50 - 150%	PASS	0	25	PASS	
PCB151	NA	56.7	0.073	0.5	ng/wet g	50	0	113	50 - 150%	PASS	5	25	PASS	
PCB153	NA	47.3	0.065	0.5	ng/wet g	50	0	95	50 - 150%	PASS	1	25	PASS	
PCB156	NA	54.1	0.089	0.5	ng/wet g	50	0	108	50 - 150%	PASS	5	25	PASS	
PCB157	NA	46.9	0.103	0.5	ng/wet g	50	0	94	50 - 150%	PASS	3	25	PASS	
PCB158	NA	49.2	0.074	0.5	ng/wet g	50	0	98	50 - 150%	PASS	1	25	PASS	
PCB167	NA	56	0.049	0.5	ng/wet g	50	0	112	50 - 150%	PASS	13	25	PASS	
PCB168+132	NA	91.7	0.094	0.5	ng/wet g	100	0	92	50 - 150%	PASS	1	25	PASS	
PCB169	NA	57.5	0.116	0.5	ng/wet g	50	0	115	50 - 150%	PASS	5	25	PASS	
PCB170	NA	49.7	0.118	0.5	ng/wet g	50	0	99	50 - 150%	PASS	6	25	PASS	
PCB174	NA	51.4	0.25	0.5	ng/wet g	50	0	103	50 - 150%	PASS	4	25	PASS	
PCB177	NA	54	0.085	0.5	ng/wet g	50	0	108	50 - 150%	PASS	5	25	PASS	
PCB180	NA	56.1	0.154	0.5	ng/wet g	50	0	112	50 - 150%	PASS	9	25	PASS	
PCB183	NA	49.9	0.056	0.5	ng/wet g	50	0	100	50 - 150%	PASS	2	25	PASS	
PCB187	NA	50	0.168	0.5	ng/wet g	50	0	100	50 - 150%	PASS	2	25	PASS	
PCB189	NA	61.1	0.109	0.5	ng/wet g	50	0	122	50 - 150%	PASS	10	25	PASS	
PCB194	NA	58.8	0.164	0.5	ng/wet g	50	0	118	50 - 150%	PASS	3	25	PASS	
PCB195	NA	58.1	0.093	0.5	ng/wet g	50	0	116	50 - 150%	PASS	11	25	PASS	
PCB199(200)	NA	50	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS	5	25	PASS	
PCB201	NA	45.7	0.104	0.5	ng/wet g	50	0	91	50 - 150%	PASS	8	25	PASS	
PCB203	NA	52.1	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS	7	25	PASS	
PCB206	NA	58.8	0.155	0.5	ng/wet g	50	0	118	50 - 150%	PASS	13	25	PASS	
PCB209	NA	52.9	0.25	0.5	ng/wet g	50	0	106	50 - 150%	PASS	3	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19			Analyzed: 06-Jun-19		
PCB003	NA	ND	0.25	0.5	ng/wet g							
PCB005	NA	ND	0.25	0.5	ng/wet g							
PCB008	NA	ND	0.017	0.5	ng/wet g							
PCB015	NA	ND	0.25	0.5	ng/wet g							
PCB018	NA	ND	0.029	0.5	ng/wet g							
PCB027	NA	ND	0.25	0.5	ng/wet g							
PCB028	NA	ND	0.023	0.5	ng/wet g							
PCB029	NA	ND	0.25	0.5	ng/wet g							
PCB031	NA	ND	0.25	0.5	ng/wet g							
PCB033	NA	ND	0.25	0.5	ng/wet g							
PCB037	NA	ND	0.06	0.5	ng/wet g							
PCB044	NA	ND	0.028	0.5	ng/wet g							
PCB049	NA	ND	0.036	0.5	ng/wet g							
PCB052	NA	ND	0.012	0.5	ng/wet g							
PCB056(060)	NA	ND	0.25	0.5	ng/wet g							
PCB066	NA	ND	0.027	0.5	ng/wet g							
PCB070	NA	ND	0.023	0.5	ng/wet g							
PCB074	NA	ND	0.021	0.5	ng/wet g							
PCB077	NA	ND	0.018	0.5	ng/wet g							
PCB081	NA	ND	0.084	0.5	ng/wet g							
PCB087	NA	ND	0.081	0.5	ng/wet g							
PCB095	NA	ND	0.25	0.5	ng/wet g							
PCB097	NA	ND	0.25	0.5	ng/wet g							
PCB099	NA	ND	0.028	0.5	ng/wet g							
PCB101	NA	ND	0.027	0.5	ng/wet g							
PCB105	NA	ND	0.047	0.5	ng/wet g							
PCB110	NA	ND	0.074	0.5	ng/wet g							
PCB114	NA	ND	0.072	0.5	ng/wet g							
PCB118	NA	ND	0.069	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g							
PCB123	NA	ND	0.018	0.5	ng/wet g							
PCB126	NA	ND	0.086	0.5	ng/wet g							
PCB128	NA	ND	0.081	0.5	ng/wet g							
PCB137	NA	ND	0.25	0.5	ng/wet g							
PCB138	NA	ND	0.057	0.5	ng/wet g							
PCB141	NA	ND	0.25	0.5	ng/wet g							
PCB149	NA	ND	0.092	0.5	ng/wet g							
PCB151	NA	ND	0.073	0.5	ng/wet g							
PCB153	NA	ND	0.065	0.5	ng/wet g							
PCB156	NA	ND	0.089	0.5	ng/wet g							
PCB157	NA	ND	0.103	0.5	ng/wet g							
PCB158	NA	ND	0.074	0.5	ng/wet g							
PCB167	NA	ND	0.049	0.5	ng/wet g							
PCB168+132	NA	ND	0.094	0.5	ng/wet g							
PCB169	NA	ND	0.116	0.5	ng/wet g							
PCB170	NA	ND	0.118	0.5	ng/wet g							
PCB174	NA	ND	0.25	0.5	ng/wet g							
PCB177	NA	ND	0.085	0.5	ng/wet g							
PCB180	NA	ND	0.154	0.5	ng/wet g							
PCB183	NA	ND	0.056	0.5	ng/wet g							
PCB187	NA	ND	0.168	0.5	ng/wet g							
PCB189	NA	ND	0.109	0.5	ng/wet g							
PCB194	NA	ND	0.164	0.5	ng/wet g							
PCB195	NA	ND	0.093	0.5	ng/wet g							
PCB199(200)	NA	ND	0.25	0.5	ng/wet g							
PCB201	NA	ND	0.104	0.5	ng/wet g							
PCB203	NA	ND	0.25	0.5	ng/wet g							
PCB206	NA	ND	0.155	0.5	ng/wet g							
PCB209	NA	ND	0.25	0.5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 06-Jun-19	
PCB003	NA	40.8	0.25	0.5	ng/wet g	50	0	82	50 - 150%	PASS		
PCB005	NA	44.8	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS		
PCB008	NA	42.5	0.017	0.5	ng/wet g	50	0	85	50 - 150%	PASS		
PCB015	NA	43.6	0.25	0.5	ng/wet g	50	0	87	50 - 150%	PASS		
PCB018	NA	45.1	0.029	0.5	ng/wet g	50	0	90	50 - 150%	PASS		
PCB027	NA	44.2	0.25	0.5	ng/wet g	50	0	88	50 - 150%	PASS		
PCB028	NA	45.4	0.023	0.5	ng/wet g	50	0	91	50 - 150%	PASS		
PCB029	NA	45.5	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS		
PCB031	NA	47.2	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB033	NA	49	0.25	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB037	NA	52.2	0.06	0.5	ng/wet g	50	0	104	50 - 150%	PASS		
PCB044	NA	47.6	0.028	0.5	ng/wet g	50	0	95	50 - 150%	PASS		
PCB049	NA	48.2	0.036	0.5	ng/wet g	50	0	96	50 - 150%	PASS		
PCB052	NA	48.8	0.012	0.5	ng/wet g	50	0	98	50 - 150%	PASS		
PCB056(060)	NA	50.6	0.25	0.5	ng/wet g	50	0	101	50 - 150%	PASS		
PCB066	NA	51.3	0.027	0.5	ng/wet g	50	0	103	50 - 150%	PASS		
PCB070	NA	50.9	0.023	0.5	ng/wet g	50	0	102	50 - 150%	PASS		
PCB074	NA	53.4	0.021	0.5	ng/wet g	50	0	107	50 - 150%	PASS		
PCB077	NA	59.2	0.018	0.5	ng/wet g	50	0	118	50 - 150%	PASS		
PCB081	NA	57	0.084	0.5	ng/wet g	50	0	114	50 - 150%	PASS		
PCB087	NA	52.6	0.081	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB095	NA	46.9	0.25	0.5	ng/wet g	50	0	94	50 - 150%	PASS		
PCB097	NA	52.9	0.25	0.5	ng/wet g	50	0	106	50 - 150%	PASS		
PCB099	NA	52	0.028	0.5	ng/wet g	50	0	104	50 - 150%	PASS		
PCB101	NA	50.6	0.027	0.5	ng/wet g	50	0	101	50 - 150%	PASS		
PCB105	NA	52.4	0.047	0.5	ng/wet g	50	0	105	50 - 150%	PASS		
PCB110	NA	52.2	0.074	0.5	ng/wet g	50	0	104	50 - 150%	PASS		
PCB114	NA	56.6	0.072	0.5	ng/wet g	50	0	113	50 - 150%	PASS		
PCB118	NA	55.1	0.069	0.5	ng/wet g	50	0	110	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	52.3	0.071	0.5	ng/wet g	50	0	105	50 - 150%	PASS			
PCB123	NA	55.6	0.018	0.5	ng/wet g	50	0	111	50 - 150%	PASS			
PCB126	NA	59.2	0.086	0.5	ng/wet g	50	0	118	50 - 150%	PASS			
PCB128	NA	53.8	0.081	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB137	NA	52	0.25	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB138	NA	50.4	0.057	0.5	ng/wet g	50	0	101	50 - 150%	PASS			
PCB141	NA	49.8	0.25	0.5	ng/wet g	50	0	100	50 - 150%	PASS			
PCB149	NA	51.6	0.092	0.5	ng/wet g	50	0	103	50 - 150%	PASS			
PCB151	NA	53.7	0.073	0.5	ng/wet g	50	0	107	50 - 150%	PASS			
PCB153	NA	50.3	0.065	0.5	ng/wet g	50	0	101	50 - 150%	PASS			
PCB156	NA	54.5	0.089	0.5	ng/wet g	50	0	109	50 - 150%	PASS			
PCB157	NA	52.1	0.103	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB158	NA	52.2	0.074	0.5	ng/wet g	50	0	104	50 - 150%	PASS			
PCB167	NA	55.2	0.049	0.5	ng/wet g	50	0	110	50 - 150%	PASS			
PCB168+132	NA	99	0.094	0.5	ng/wet g	100	0	99	50 - 150%	PASS			
PCB169	NA	64.7	0.116	0.5	ng/wet g	50	0	129	50 - 150%	PASS			
PCB170	NA	56.3	0.118	0.5	ng/wet g	50	0	113	50 - 150%	PASS			
PCB174	NA	54	0.25	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB177	NA	49.7	0.085	0.5	ng/wet g	50	0	99	50 - 150%	PASS			
PCB180	NA	56.7	0.154	0.5	ng/wet g	50	0	113	50 - 150%	PASS			
PCB183	NA	53.3	0.056	0.5	ng/wet g	50	0	107	50 - 150%	PASS			
PCB187	NA	54.1	0.168	0.5	ng/wet g	50	0	108	50 - 150%	PASS			
PCB189	NA	60.9	0.109	0.5	ng/wet g	50	0	122	50 - 150%	PASS			
PCB194	NA	59.8	0.164	0.5	ng/wet g	50	0	120	50 - 150%	PASS			
PCB195	NA	56.6	0.093	0.5	ng/wet g	50	0	113	50 - 150%	PASS			
PCB199(200)	NA	55.3	0.25	0.5	ng/wet g	50	0	111	50 - 150%	PASS			
PCB201	NA	50.3	0.104	0.5	ng/wet g	50	0	101	50 - 150%	PASS			
PCB203	NA	55.8	0.25	0.5	ng/wet g	50	0	112	50 - 150%	PASS			
PCB206	NA	57.5	0.155	0.5	ng/wet g	50	0	115	50 - 150%	PASS			
PCB209	NA	55.7	0.25	0.5	ng/wet g	50	0	111	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19					Analyzed: 06-Jun-19	
PCB003	NA	39.1	0.25	0.5	ng/wet g	50	0	78	50 - 150%	PASS	5	25	PASS
PCB005	NA	38.5	0.25	0.5	ng/wet g	50	0	77	50 - 150%	PASS	16	25	PASS
PCB008	NA	46.6	0.017	0.5	ng/wet g	50	0	93	50 - 150%	PASS	9	25	PASS
PCB015	NA	41.7	0.25	0.5	ng/wet g	50	0	83	50 - 150%	PASS	5	25	PASS
PCB018	NA	42.8	0.029	0.5	ng/wet g	50	0	86	50 - 150%	PASS	5	25	PASS
PCB027	NA	41.7	0.25	0.5	ng/wet g	50	0	83	50 - 150%	PASS	6	25	PASS
PCB028	NA	43.7	0.023	0.5	ng/wet g	50	0	87	50 - 150%	PASS	4	25	PASS
PCB029	NA	44.2	0.25	0.5	ng/wet g	50	0	88	50 - 150%	PASS	3	25	PASS
PCB031	NA	44	0.25	0.5	ng/wet g	50	0	88	50 - 150%	PASS	7	25	PASS
PCB033	NA	44.8	0.25	0.5	ng/wet g	50	0	90	50 - 150%	PASS	9	25	PASS
PCB037	NA	49.2	0.06	0.5	ng/wet g	50	0	98	50 - 150%	PASS	6	25	PASS
PCB044	NA	45.6	0.028	0.5	ng/wet g	50	0	91	50 - 150%	PASS	4	25	PASS
PCB049	NA	47.6	0.036	0.5	ng/wet g	50	0	95	50 - 150%	PASS	1	25	PASS
PCB052	NA	46.5	0.012	0.5	ng/wet g	50	0	93	50 - 150%	PASS	5	25	PASS
PCB056(060)	NA	47.7	0.25	0.5	ng/wet g	50	0	95	50 - 150%	PASS	6	25	PASS
PCB066	NA	48.7	0.027	0.5	ng/wet g	50	0	97	50 - 150%	PASS	6	25	PASS
PCB070	NA	49	0.023	0.5	ng/wet g	50	0	98	50 - 150%	PASS	4	25	PASS
PCB074	NA	48.7	0.021	0.5	ng/wet g	50	0	97	50 - 150%	PASS	10	25	PASS
PCB077	NA	56.4	0.018	0.5	ng/wet g	50	0	113	50 - 150%	PASS	4	25	PASS
PCB081	NA	53.7	0.084	0.5	ng/wet g	50	0	107	50 - 150%	PASS	6	25	PASS
PCB087	NA	48.5	0.081	0.5	ng/wet g	50	0	97	50 - 150%	PASS	8	25	PASS
PCB095	NA	45.7	0.25	0.5	ng/wet g	50	0	91	50 - 150%	PASS	3	25	PASS
PCB097	NA	50.6	0.25	0.5	ng/wet g	50	0	101	50 - 150%	PASS	5	25	PASS
PCB099	NA	47.8	0.028	0.5	ng/wet g	50	0	96	50 - 150%	PASS	8	25	PASS
PCB101	NA	46.5	0.027	0.5	ng/wet g	50	0	93	50 - 150%	PASS	8	25	PASS
PCB105	NA	51.2	0.047	0.5	ng/wet g	50	0	102	50 - 150%	PASS	3	25	PASS
PCB110	NA	49.1	0.074	0.5	ng/wet g	50	0	98	50 - 150%	PASS	6	25	PASS
PCB114	NA	54.1	0.072	0.5	ng/wet g	50	0	108	50 - 150%	PASS	5	25	PASS
PCB118	NA	52.9	0.069	0.5	ng/wet g	50	0	106	50 - 150%	PASS	4	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	49.3	0.071	0.5	ng/wet g	50	0	99	50 - 150%	PASS	6	25	PASS	
PCB123	NA	52.2	0.018	0.5	ng/wet g	50	0	104	50 - 150%	PASS	7	25	PASS	
PCB126	NA	58.3	0.086	0.5	ng/wet g	50	0	117	50 - 150%	PASS	1	25	PASS	
PCB128	NA	47.7	0.081	0.5	ng/wet g	50	0	95	50 - 150%	PASS	13	25	PASS	
PCB137	NA	48.5	0.25	0.5	ng/wet g	50	0	97	50 - 150%	PASS	7	25	PASS	
PCB138	NA	50.6	0.057	0.5	ng/wet g	50	0	101	50 - 150%	PASS	0	25	PASS	
PCB141	NA	49.6	0.25	0.5	ng/wet g	50	0	99	50 - 150%	PASS	1	25	PASS	
PCB149	NA	47.1	0.092	0.5	ng/wet g	50	0	94	50 - 150%	PASS	9	25	PASS	
PCB151	NA	49.9	0.073	0.5	ng/wet g	50	0	100	50 - 150%	PASS	7	25	PASS	
PCB153	NA	49.3	0.065	0.5	ng/wet g	50	0	99	50 - 150%	PASS	2	25	PASS	
PCB156	NA	56.9	0.089	0.5	ng/wet g	50	0	114	50 - 150%	PASS	4	25	PASS	
PCB157	NA	49.7	0.103	0.5	ng/wet g	50	0	99	50 - 150%	PASS	5	25	PASS	
PCB158	NA	50.5	0.074	0.5	ng/wet g	50	0	101	50 - 150%	PASS	3	25	PASS	
PCB167	NA	58.2	0.049	0.5	ng/wet g	50	0	116	50 - 150%	PASS	5	25	PASS	
PCB168+132	NA	95	0.094	0.5	ng/wet g	100	0	95	50 - 150%	PASS	4	25	PASS	
PCB169	NA	64.2	0.116	0.5	ng/wet g	50	0	128	50 - 150%	PASS	1	25	PASS	
PCB170	NA	56.2	0.118	0.5	ng/wet g	50	0	112	50 - 150%	PASS	1	25	PASS	
PCB174	NA	53.6	0.25	0.5	ng/wet g	50	0	107	50 - 150%	PASS	1	25	PASS	
PCB177	NA	48.5	0.085	0.5	ng/wet g	50	0	97	50 - 150%	PASS	2	25	PASS	
PCB180	NA	54.5	0.154	0.5	ng/wet g	50	0	109	50 - 150%	PASS	4	25	PASS	
PCB183	NA	50.1	0.056	0.5	ng/wet g	50	0	100	50 - 150%	PASS	7	25	PASS	
PCB187	NA	50.7	0.168	0.5	ng/wet g	50	0	101	50 - 150%	PASS	7	25	PASS	
PCB189	NA	61.7	0.109	0.5	ng/wet g	50	0	123	50 - 150%	PASS	1	25	PASS	
PCB194	NA	61.2	0.164	0.5	ng/wet g	50	0	122	50 - 150%	PASS	2	25	PASS	
PCB195	NA	58.8	0.093	0.5	ng/wet g	50	0	118	50 - 150%	PASS	4	25	PASS	
PCB199(200)	NA	52.3	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS	6	25	PASS	
PCB201	NA	48	0.104	0.5	ng/wet g	50	0	96	50 - 150%	PASS	5	25	PASS	
PCB203	NA	52.3	0.25	0.5	ng/wet g	50	0	105	50 - 150%	PASS	6	25	PASS	
PCB206	NA	59.7	0.155	0.5	ng/wet g	50	0	119	50 - 150%	PASS	3	25	PASS	
PCB209	NA	59.5	0.25	0.5	ng/wet g	50	0	119	50 - 150%	PASS	7	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62354-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19			Analyzed: 11-May-19		
PCB018	NA	637	0.029	0.5	ng/wet g	2.72	23419	50 - 150%	FAIL			1
PCB028	NA	20.3	0.023	0.5	ng/wet g	14.1	144	50 - 150%	PASS			
PCB031	NA	8.57	0.25	0.5	ng/wet g	10.4	82	50 - 150%	PASS			
PCB044	NA	20.6	0.028	0.5	ng/wet g	20.4	101	50 - 150%	PASS			
PCB049	NA	25.1	0.036	0.5	ng/wet g	27.3	92	50 - 150%	PASS			
PCB052	NA	36.3	0.012	0.5	ng/wet g	36.4	100	50 - 150%	PASS			
PCB056(060)	NA	23.2	0.25	0.5	ng/wet g	12.8	181	50 - 150%	FAIL			1
PCB066	NA	61.1	0.027	0.5	ng/wet g	69.4	88	50 - 150%	PASS			
PCB070	NA	51.4	0.023	0.5	ng/wet g	50	103	50 - 150%	PASS			
PCB074	NA	27.8	0.021	0.5	ng/wet g	33.7	82	50 - 150%	PASS			
PCB087	NA	30.9	0.081	0.5	ng/wet g	27.9	111	50 - 150%	PASS			
PCB095	NA	32.5	0.25	0.5	ng/wet g	33.6	97	50 - 150%	PASS			
PCB099	NA	54.4	0.028	0.5	ng/wet g	78	70	50 - 150%	PASS			
PCB101	NA	67.3	0.027	0.5	ng/wet g	90.8	74	50 - 150%	PASS			
PCB105	NA	46.7	0.047	0.5	ng/wet g	50.3	93	50 - 150%	PASS			
PCB110	NA	66.7	0.074	0.5	ng/wet g	94.6	71	50 - 150%	PASS			
PCB118	NA	81.5	0.069	0.5	ng/wet g	112	73	50 - 150%	PASS			
PCB128	NA	36.1	0.081	0.5	ng/wet g	31.6	114	50 - 150%	PASS			
PCB138	NA	220	0.057	0.5	ng/wet g	162	136	50 - 150%	PASS			
PCB149	NA	59.3	0.092	0.5	ng/wet g	67.1	88	50 - 150%	PASS			
PCB151	NA	16.7	0.073	0.5	ng/wet g	23.3	72	50 - 150%	PASS			
PCB153	NA	177	0.065	0.5	ng/wet g	201	88	50 - 150%	PASS			
PCB156	NA	12.8	0.089	0.5	ng/wet g	13.3	96	50 - 150%	PASS			
PCB157	NA	3.47	0.103	0.5	ng/wet g	4.08	85	50 - 150%	PASS			
PCB158	NA	16.4	0.074	0.5	ng/wet g	11.3	145	50 - 150%	PASS			
PCB168+132	NA	23.8	0.094	0.5	ng/wet g	20.8	114	50 - 150%	PASS			
PCB170	NA	37.6	0.118	0.5	ng/wet g	29.2	129	50 - 150%	PASS			
PCB174	NA	21.8	0.25	0.5	ng/wet g	18.6	117	50 - 150%	PASS			
PCB180	NA	62.3	0.154	0.5	ng/wet g	80.8	77	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB183	NA	28	0.056	0.5	ng/wet g	23.3		120	50 - 150%	PASS			
PCB187	NA	63.6	0.168	0.5	ng/wet g	54.8		116	50 - 150%	PASS			
PCB194	NA	13.3	0.164	0.5	ng/wet g	13.2		101	50 - 150%	PASS			
PCB195	NA	2.91	0.093	0.5	ng/wet g	4.95		59	50 - 150%	PASS			
PCB201	NA	2.75	0.104	0.5	ng/wet g	3.59		77	50 - 150%	PASS			
PCB206	NA	2.79	0.155	0.5	ng/wet g	6.24		45	50 - 150%	FAIL			1,Q
PCB209	NA	1.19	0.25	0.5	ng/wet g	2.45		49	50 - 150%	FAIL			1,Q

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62355-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
PCB018	NA	2.42	0.029	0.5	ng/wet g	2.72		89	50 - 150%	PASS		
PCB028	NA	17.3	0.023	0.5	ng/wet g	14.1		123	50 - 150%	PASS		
PCB031	NA	6.67	0.25	0.5	ng/wet g	10.4		64	50 - 150%	PASS		
PCB044	NA	19.5	0.028	0.5	ng/wet g	20.4		96	50 - 150%	PASS		
PCB049	NA	27	0.036	0.5	ng/wet g	27.3		99	50 - 150%	PASS		
PCB052	NA	33.7	0.012	0.5	ng/wet g	36.4		93	50 - 150%	PASS		
PCB056(060)	NA	22.4	0.25	0.5	ng/wet g	12.8		175	50 - 150%	FAIL		1
PCB066	NA	106	0.027	0.5	ng/wet g	69.4		153	50 - 150%	FAIL		1
PCB070	NA	52.6	0.023	0.5	ng/wet g	50		105	50 - 150%	PASS		
PCB074	NA	31.3	0.021	0.5	ng/wet g	33.7		93	50 - 150%	PASS		
PCB087	NA	35.3	0.081	0.5	ng/wet g	27.9		127	50 - 150%	PASS		
PCB095	NA	32.5	0.25	0.5	ng/wet g	33.6		97	50 - 150%	PASS		
PCB099	NA	61.6	0.028	0.5	ng/wet g	78		79	50 - 150%	PASS		
PCB101	NA	67.8	0.027	0.5	ng/wet g	90.8		75	50 - 150%	PASS		
PCB105	NA	40.9	0.047	0.5	ng/wet g	50.3		81	50 - 150%	PASS		
PCB110	NA	75.9	0.074	0.5	ng/wet g	94.6		80	50 - 150%	PASS		
PCB118	NA	94.3	0.069	0.5	ng/wet g	112		84	50 - 150%	PASS		
PCB128	NA	36	0.081	0.5	ng/wet g	31.6		114	50 - 150%	PASS		
PCB138	NA	203	0.057	0.5	ng/wet g	162		125	50 - 150%	PASS		
PCB149	NA	60.3	0.092	0.5	ng/wet g	67.1		90	50 - 150%	PASS		
PCB151	NA	18.9	0.073	0.5	ng/wet g	23.3		81	50 - 150%	PASS		
PCB153	NA	160	0.065	0.5	ng/wet g	201		80	50 - 150%	PASS		
PCB156	NA	13.4	0.089	0.5	ng/wet g	13.3		101	50 - 150%	PASS		
PCB157	NA	3.91	0.103	0.5	ng/wet g	4.08		96	50 - 150%	PASS		
PCB158	NA	11.5	0.074	0.5	ng/wet g	11.3		102	50 - 150%	PASS		
PCB168+132	NA	15.5	0.094	0.5	ng/wet g	20.8		75	50 - 150%	PASS		
PCB170	NA	25.5	0.118	0.5	ng/wet g	29.2		87	50 - 150%	PASS		
PCB174	NA	14.6	0.25	0.5	ng/wet g	18.6		78	50 - 150%	PASS		
PCB180	NA	71	0.154	0.5	ng/wet g	80.8		88	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB183	NA	22.6	0.056	0.5	ng/wet g	23.3		97	50 - 150%	PASS			
PCB187	NA	57.5	0.168	0.5	ng/wet g	54.8		105	50 - 150%	PASS			
PCB194	NA	11.4	0.164	0.5	ng/wet g	13.2		86	50 - 150%	PASS			
PCB195	NA	6.87	0.093	0.5	ng/wet g	4.95		139	50 - 150%	PASS			
PCB201	NA	3.05	0.104	0.5	ng/wet g	3.59		85	50 - 150%	PASS			
PCB206	NA	5.92	0.155	0.5	ng/wet g	6.24		95	50 - 150%	PASS			
PCB209	NA	1.72	0.25	0.5	ng/wet g	2.45		70	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62356-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**			**Received:**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19			Analyzed: 06-Jun-19		
PCB018	NA	416	0.029	0.5	ng/wet g	2.72	15294	50 - 150%	FAIL			1
PCB028	NA	8.69	0.023	0.5	ng/wet g	14.1	62	50 - 150%	PASS			
PCB031	NA	6.69	0.25	0.5	ng/wet g	10.4	64	50 - 150%	PASS			
PCB044	NA	10.7	0.028	0.5	ng/wet g	20.4	52	50 - 150%	PASS			
PCB049	NA	20.4	0.036	0.5	ng/wet g	27.3	75	50 - 150%	PASS			
PCB052	NA	23.4	0.012	0.5	ng/wet g	36.4	64	50 - 150%	PASS			
PCB056(060)	NA	4.52	0.25	0.5	ng/wet g	12.8	35	50 - 150%	FAIL			1
PCB066	NA	71.4	0.027	0.5	ng/wet g	69.4	103	50 - 150%	PASS			
PCB070	NA	44.6	0.023	0.5	ng/wet g	50	89	50 - 150%	PASS			
PCB074	NA	19.2	0.021	0.5	ng/wet g	33.7	57	50 - 150%	PASS			
PCB087	NA	19.5	0.081	0.5	ng/wet g	27.9	70	50 - 150%	PASS			
PCB095	NA	25.5	0.25	0.5	ng/wet g	33.6	76	50 - 150%	PASS			
PCB099	NA	44.6	0.028	0.5	ng/wet g	78	57	50 - 150%	PASS			
PCB101	NA	49.6	0.027	0.5	ng/wet g	90.8	55	50 - 150%	PASS			
PCB105	NA	32.8	0.047	0.5	ng/wet g	50.3	65	50 - 150%	PASS			
PCB110	NA	59.5	0.074	0.5	ng/wet g	94.6	63	50 - 150%	PASS			
PCB118	NA	63.9	0.069	0.5	ng/wet g	112	57	50 - 150%	PASS			
PCB128	NA	31.4	0.081	0.5	ng/wet g	31.6	99	50 - 150%	PASS			
PCB138	NA	190	0.057	0.5	ng/wet g	162	117	50 - 150%	PASS			
PCB149	NA	52.6	0.092	0.5	ng/wet g	67.1	78	50 - 150%	PASS			
PCB151	NA	14.1	0.073	0.5	ng/wet g	23.3	61	50 - 150%	PASS			
PCB153	NA	116	0.065	0.5	ng/wet g	201	58	50 - 150%	PASS			
PCB156	NA	16.1	0.089	0.5	ng/wet g	13.3	121	50 - 150%	PASS			
PCB157	NA	1.82	0.103	0.5	ng/wet g	4.08	45	50 - 150%	FAIL			1,Q
PCB158	NA	13	0.074	0.5	ng/wet g	11.3	115	50 - 150%	PASS			
PCB168+132	NA	6.77	0.094	0.5	ng/wet g	20.8	33	50 - 150%	FAIL			1,Q
PCB170	NA	41.4	0.118	0.5	ng/wet g	29.2	142	50 - 150%	PASS			
PCB174	NA	13.2	0.25	0.5	ng/wet g	18.6	71	50 - 150%	PASS			
PCB180	NA	64	0.154	0.5	ng/wet g	80.8	79	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB183	NA	17.2	0.056	0.5	ng/wet g	23.3		74	50 - 150%	PASS			
PCB187	NA	47.8	0.168	0.5	ng/wet g	54.8		87	50 - 150%	PASS			
PCB194	NA	9.53	0.164	0.5	ng/wet g	13.2		72	50 - 150%	PASS			
PCB195	NA	2.76	0.093	0.5	ng/wet g	4.95		56	50 - 150%	PASS			
PCB201	NA	2.64	0.104	0.5	ng/wet g	3.59		74	50 - 150%	PASS			
PCB206	NA	6.57	0.155	0.5	ng/wet g	6.24		105	50 - 150%	PASS			
PCB209	NA	1.46	0.25	0.5	ng/wet g	2.45		60	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS1	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19			Analyzed: 11-May-19	
PCB003	NA	11	0.25	0.5	ng/wet g	9.63	0	114	50 - 150%		PASS	
PCB005	NA	9.03	0.25	0.5	ng/wet g	9.63	0	94	50 - 150%		PASS	
PCB008	NA	11.4	0.017	0.5	ng/wet g	9.63	0	118	50 - 150%		PASS	
PCB015	NA	10.5	0.25	0.5	ng/wet g	9.63	0	109	50 - 150%		PASS	
PCB018	NA	10.1	0.029	0.5	ng/wet g	9.63	0	105	50 - 150%		PASS	
PCB027	NA	10.4	0.25	0.5	ng/wet g	9.63	0	108	50 - 150%		PASS	
PCB028	NA	11.2	0.023	0.5	ng/wet g	9.63	0	116	50 - 150%		PASS	
PCB029	NA	9.83	0.25	0.5	ng/wet g	9.63	0	102	50 - 150%		PASS	
PCB031	NA	8.87	0.25	0.5	ng/wet g	9.63	0	92	50 - 150%		PASS	
PCB033	NA	10.7	0.25	0.5	ng/wet g	9.63	0	111	50 - 150%		PASS	
PCB037	NA	9.69	0.06	0.5	ng/wet g	9.63	0	101	50 - 150%		PASS	
PCB044	NA	9.57	0.028	0.5	ng/wet g	9.63	0	99	50 - 150%		PASS	
PCB049	NA	10.6	0.036	0.5	ng/wet g	9.63	0	110	50 - 150%		PASS	
PCB052	NA	9.83	0.012	0.5	ng/wet g	9.63	0	102	50 - 150%		PASS	
PCB056(060)	NA	10.5	0.25	0.5	ng/wet g	9.63	0	109	50 - 150%		PASS	
PCB066	NA	10.9	0.027	0.5	ng/wet g	9.63	0	113	50 - 150%		PASS	
PCB070	NA	11.5	0.023	0.5	ng/wet g	9.63	0	119	50 - 150%		PASS	
PCB074	NA	10	0.021	0.5	ng/wet g	9.63	0	104	50 - 150%		PASS	
PCB077	NA	10.3	0.018	0.5	ng/wet g	9.63	0	107	50 - 150%		PASS	
PCB081	NA	10.9	0.084	0.5	ng/wet g	9.63	0	113	50 - 150%		PASS	
PCB087	NA	10.2	0.081	0.5	ng/wet g	9.63	0.46	101	50 - 150%		PASS	
PCB095	NA	9.94	0.25	0.5	ng/wet g	9.63	0	103	50 - 150%		PASS	
PCB097	NA	9.2	0.25	0.5	ng/wet g	9.63	0	96	50 - 150%		PASS	
PCB099	NA	10.4	0.028	0.5	ng/wet g	9.63	0.911	99	50 - 150%		PASS	
PCB101	NA	10.5	0.027	0.5	ng/wet g	9.63	0	109	50 - 150%		PASS	
PCB105	NA	9.82	0.047	0.5	ng/wet g	9.63	0	102	50 - 150%		PASS	
PCB110	NA	9.6	0.074	0.5	ng/wet g	9.63	0	100	50 - 150%		PASS	
PCB114	NA	10.1	0.072	0.5	ng/wet g	9.63	0	105	50 - 150%		PASS	
PCB118	NA	13.3	0.069	0.5	ng/wet g	9.63	0.831	129	50 - 150%		PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	6.66	0.071	0.5	ng/wet g	9.63	0	69	50 - 150%	PASS			
PCB123	NA	6.94	0.018	0.5	ng/wet g	9.63	0	72	50 - 150%	PASS			
PCB126	NA	10.5	0.086	0.5	ng/wet g	9.63	0	109	50 - 150%	PASS			
PCB128	NA	8.3	0.081	0.5	ng/wet g	9.63	0	86	50 - 150%	PASS			
PCB137	NA	9.35	0.25	0.5	ng/wet g	9.63	0	97	50 - 150%	PASS			
PCB138	NA	8.76	0.057	0.5	ng/wet g	9.63	1.53	75	50 - 150%	PASS			
PCB141	NA	9.71	0.25	0.5	ng/wet g	9.63	0	101	50 - 150%	PASS			
PCB149	NA	10.3	0.092	0.5	ng/wet g	9.63	0	107	50 - 150%	PASS			
PCB151	NA	9.9	0.073	0.5	ng/wet g	9.63	0	103	50 - 150%	PASS			
PCB153	NA	9.63	0.065	0.5	ng/wet g	9.63	2.18	77	50 - 150%	PASS			
PCB156	NA	10.2	0.089	0.5	ng/wet g	9.63	0	106	50 - 150%	PASS			
PCB157	NA	9.62	0.103	0.5	ng/wet g	9.63	0	100	50 - 150%	PASS			
PCB158	NA	11.6	0.074	0.5	ng/wet g	9.63	0	120	50 - 150%	PASS			
PCB167	NA	11.1	0.049	0.5	ng/wet g	9.63	0	115	50 - 150%	PASS			
PCB168+132	NA	21	0.094	0.5	ng/wet g	19.3	0	109	50 - 150%	PASS			
PCB169	NA	9.77	0.116	0.5	ng/wet g	9.63	0	101	50 - 150%	PASS			
PCB170	NA	10.1	0.118	0.5	ng/wet g	9.63	0	105	50 - 150%	PASS			
PCB174	NA	9.87	0.25	0.5	ng/wet g	9.63	0	102	50 - 150%	PASS			
PCB177	NA	10.3	0.085	0.5	ng/wet g	9.63	0	107	50 - 150%	PASS			
PCB180	NA	9.9	0.154	0.5	ng/wet g	9.63	0	103	50 - 150%	PASS			
PCB183	NA	10.2	0.056	0.5	ng/wet g	9.63	0	106	50 - 150%	PASS			
PCB187	NA	10.5	0.168	0.5	ng/wet g	9.63	0	109	50 - 150%	PASS			
PCB189	NA	9.84	0.109	0.5	ng/wet g	9.63	0	102	50 - 150%	PASS			
PCB194	NA	9.45	0.164	0.5	ng/wet g	9.63	0	98	50 - 150%	PASS			
PCB195	NA	9.95	0.093	0.5	ng/wet g	9.63	0	103	50 - 150%	PASS			
PCB199(200)	NA	10.5	0.25	0.5	ng/wet g	9.63	0	109	50 - 150%	PASS			
PCB201	NA	8.92	0.104	0.5	ng/wet g	9.63	0	93	50 - 150%	PASS			
PCB203	NA	9.12	0.25	0.5	ng/wet g	9.63	0	95	50 - 150%	PASS			
PCB206	NA	8.84	0.155	0.5	ng/wet g	9.63	0	92	50 - 150%	PASS			
PCB209	NA	6.74	0.25	0.5	ng/wet g	9.63	0	70	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19			Analyzed: 11-May-19		
PCB003	NA	9.14	0.25	0.5	ng/wet g	8.79	0	104	50 - 150%	PASS	9	25	PASS
PCB005	NA	7.97	0.25	0.5	ng/wet g	8.79	0	91	50 - 150%	PASS	3	25	PASS
PCB008	NA	9.56	0.017	0.5	ng/wet g	8.79	0	109	50 - 150%	PASS	8	25	PASS
PCB015	NA	9.27	0.25	0.5	ng/wet g	8.79	0	105	50 - 150%	PASS	4	25	PASS
PCB018	NA	9.6	0.029	0.5	ng/wet g	8.79	0	109	50 - 150%	PASS	4	25	PASS
PCB027	NA	8.62	0.25	0.5	ng/wet g	8.79	0	98	50 - 150%	PASS	10	25	PASS
PCB028	NA	10.5	0.023	0.5	ng/wet g	8.79	0	119	50 - 150%	PASS	3	25	PASS
PCB029	NA	8.18	0.25	0.5	ng/wet g	8.79	0	93	50 - 150%	PASS	9	25	PASS
PCB031	NA	7.84	0.25	0.5	ng/wet g	8.79	0	89	50 - 150%	PASS	3	25	PASS
PCB033	NA	8.77	0.25	0.5	ng/wet g	8.79	0	100	50 - 150%	PASS	10	25	PASS
PCB037	NA	8.72	0.06	0.5	ng/wet g	8.79	0	99	50 - 150%	PASS	2	25	PASS
PCB044	NA	8.45	0.028	0.5	ng/wet g	8.79	0	96	50 - 150%	PASS	3	25	PASS
PCB049	NA	9.04	0.036	0.5	ng/wet g	8.79	0	103	50 - 150%	PASS	7	25	PASS
PCB052	NA	8.63	0.012	0.5	ng/wet g	8.79	0	98	50 - 150%	PASS	4	25	PASS
PCB056(060)	NA	8.88	0.25	0.5	ng/wet g	8.79	0	101	50 - 150%	PASS	8	25	PASS
PCB066	NA	8.79	0.027	0.5	ng/wet g	8.79	0	100	50 - 150%	PASS	12	25	PASS
PCB070	NA	9.29	0.023	0.5	ng/wet g	8.79	0	106	50 - 150%	PASS	12	25	PASS
PCB074	NA	8.92	0.021	0.5	ng/wet g	8.79	0	101	50 - 150%	PASS	3	25	PASS
PCB077	NA	8.92	0.018	0.5	ng/wet g	8.79	0	101	50 - 150%	PASS	6	25	PASS
PCB081	NA	9.81	0.084	0.5	ng/wet g	8.79	0	112	50 - 150%	PASS	1	25	PASS
PCB087	NA	8.7	0.081	0.5	ng/wet g	8.79	0.46	94	50 - 150%	PASS	7	25	PASS
PCB095	NA	8.04	0.25	0.5	ng/wet g	8.79	0	91	50 - 150%	PASS	12	25	PASS
PCB097	NA	8.79	0.25	0.5	ng/wet g	8.79	0	100	50 - 150%	PASS	4	25	PASS
PCB099	NA	9.1	0.028	0.5	ng/wet g	8.79	0.911	93	50 - 150%	PASS	6	25	PASS
PCB101	NA	8.47	0.027	0.5	ng/wet g	8.79	0	96	50 - 150%	PASS	13	25	PASS
PCB105	NA	8.95	0.047	0.5	ng/wet g	8.79	0	102	50 - 150%	PASS	0	25	PASS
PCB110	NA	8.56	0.074	0.5	ng/wet g	8.79	0	97	50 - 150%	PASS	3	25	PASS
PCB114	NA	9.14	0.072	0.5	ng/wet g	8.79	0	104	50 - 150%	PASS	1	25	PASS
PCB118	NA	11.4	0.069	0.5	ng/wet g	8.79	0.831	120	50 - 150%	PASS	7	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	8.18	0.071	0.5	ng/wet g	8.79	0	93	50 - 150%	PASS	30	25	FAIL	Q
PCB123	NA	7.44	0.018	0.5	ng/wet g	8.79	0	85	50 - 150%	PASS	17	25	PASS	
PCB126	NA	9.25	0.086	0.5	ng/wet g	8.79	0	105	50 - 150%	PASS	4	25	PASS	
PCB128	NA	8.24	0.081	0.5	ng/wet g	8.79	0	94	50 - 150%	PASS	9	25	PASS	
PCB137	NA	9.25	0.25	0.5	ng/wet g	8.79	0	105	50 - 150%	PASS	8	25	PASS	
PCB138	NA	9.49	0.057	0.5	ng/wet g	8.79	1.53	91	50 - 150%	PASS	19	25	PASS	
PCB141	NA	8.27	0.25	0.5	ng/wet g	8.79	0	94	50 - 150%	PASS	7	25	PASS	
PCB149	NA	8.79	0.092	0.5	ng/wet g	8.79	0	100	50 - 150%	PASS	7	25	PASS	
PCB151	NA	8.2	0.073	0.5	ng/wet g	8.79	0	93	50 - 150%	PASS	10	25	PASS	
PCB153	NA	10.6	0.065	0.5	ng/wet g	8.79	2.18	96	50 - 150%	PASS	22	25	PASS	
PCB156	NA	8.99	0.089	0.5	ng/wet g	8.79	0	102	50 - 150%	PASS	4	25	PASS	
PCB157	NA	8.1	0.103	0.5	ng/wet g	8.79	0	92	50 - 150%	PASS	8	25	PASS	
PCB158	NA	9.03	0.074	0.5	ng/wet g	8.79	0	103	50 - 150%	PASS	15	25	PASS	
PCB167	NA	9.53	0.049	0.5	ng/wet g	8.79	0	108	50 - 150%	PASS	6	25	PASS	
PCB168+132	NA	20.8	0.094	0.5	ng/wet g	17.6	0	118	50 - 150%	PASS	8	25	PASS	
PCB169	NA	8.71	0.116	0.5	ng/wet g	8.79	0	99	50 - 150%	PASS	2	25	PASS	
PCB170	NA	9.93	0.118	0.5	ng/wet g	8.79	0	113	50 - 150%	PASS	7	25	PASS	
PCB174	NA	9	0.25	0.5	ng/wet g	8.79	0	102	50 - 150%	PASS	0	25	PASS	
PCB177	NA	8.46	0.085	0.5	ng/wet g	8.79	0	96	50 - 150%	PASS	11	25	PASS	
PCB180	NA	8.97	0.154	0.5	ng/wet g	8.79	0	102	50 - 150%	PASS	1	25	PASS	
PCB183	NA	9.35	0.056	0.5	ng/wet g	8.79	0	106	50 - 150%	PASS	0	25	PASS	
PCB187	NA	9.35	0.168	0.5	ng/wet g	8.79	0	106	50 - 150%	PASS	3	25	PASS	
PCB189	NA	8.83	0.109	0.5	ng/wet g	8.79	0	100	50 - 150%	PASS	2	25	PASS	
PCB194	NA	8.78	0.164	0.5	ng/wet g	8.79	0	100	50 - 150%	PASS	2	25	PASS	
PCB195	NA	8.46	0.093	0.5	ng/wet g	8.79	0	96	50 - 150%	PASS	7	25	PASS	
PCB199(200)	NA	7.84	0.25	0.5	ng/wet g	8.79	0	89	50 - 150%	PASS	20	25	PASS	
PCB201	NA	7.55	0.104	0.5	ng/wet g	8.79	0	86	50 - 150%	PASS	8	25	PASS	
PCB203	NA	7.48	0.25	0.5	ng/wet g	8.79	0	85	50 - 150%	PASS	11	25	PASS	
PCB206	NA	7.67	0.155	0.5	ng/wet g	8.79	0	87	50 - 150%	PASS	6	25	PASS	
PCB209	NA	6.78	0.25	0.5	ng/wet g	8.79	0	77	50 - 150%	PASS	10	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-R2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19			Analyzed: 12-May-19		
PCB003	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB005	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB008	NA	ND	0.017	0.5	ng/wet g			0	25 PASS			
PCB015	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB018	NA	ND	0.029	0.5	ng/wet g			0	25 PASS			
PCB027	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB028	NA	ND	0.023	0.5	ng/wet g			0	25 PASS			
PCB029	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB031	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB033	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB037	NA	ND	0.06	0.5	ng/wet g			0	25 PASS			
PCB044	NA	ND	0.028	0.5	ng/wet g			0	25 PASS			
PCB049	NA	ND	0.036	0.5	ng/wet g			0	25 PASS			
PCB052	NA	ND	0.012	0.5	ng/wet g			0	25 PASS			
PCB056(060)	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB066	NA	ND	0.027	0.5	ng/wet g			0	25 PASS			
PCB070	NA	ND	0.023	0.5	ng/wet g			0	25 PASS			
PCB074	NA	ND	0.021	0.5	ng/wet g			0	25 PASS			
PCB077	NA	ND	0.018	0.5	ng/wet g			0	25 PASS			
PCB081	NA	ND	0.084	0.5	ng/wet g			0	25 PASS			
PCB087	NA	0.497	0.081	0.5	ng/wet g			16	25 PASS			J
PCB095	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB097	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB099	NA	0.781	0.028	0.5	ng/wet g			28	25 FAIL			Q
PCB101	NA	ND	0.027	0.5	ng/wet g			0	25 PASS			
PCB105	NA	ND	0.047	0.5	ng/wet g			0	25 PASS			
PCB110	NA	ND	0.074	0.5	ng/wet g			0	25 PASS			
PCB114	NA	ND	0.072	0.5	ng/wet g			0	25 PASS			
PCB118	NA	0.678	0.069	0.5	ng/wet g			37	25 FAIL			SL

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g					0	25	PASS	
PCB123	NA	ND	0.018	0.5	ng/wet g					0	25	PASS	
PCB126	NA	ND	0.086	0.5	ng/wet g					0	25	PASS	
PCB128	NA	ND	0.081	0.5	ng/wet g					0	25	PASS	
PCB137	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB138	NA	1.15	0.057	0.5	ng/wet g					49	25	FAIL	NH
PCB141	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB149	NA	ND	0.092	0.5	ng/wet g					0	25	PASS	
PCB151	NA	ND	0.073	0.5	ng/wet g					0	25	PASS	
PCB153	NA	1.83	0.065	0.5	ng/wet g					32	25	FAIL	NH
PCB156	NA	ND	0.089	0.5	ng/wet g					0	25	PASS	
PCB157	NA	ND	0.103	0.5	ng/wet g					0	25	PASS	
PCB158	NA	ND	0.074	0.5	ng/wet g					0	25	PASS	
PCB167	NA	ND	0.049	0.5	ng/wet g					0	25	PASS	
PCB168+132	NA	ND	0.094	0.5	ng/wet g					0	25	PASS	
PCB169	NA	ND	0.116	0.5	ng/wet g					0	25	PASS	
PCB170	NA	ND	0.118	0.5	ng/wet g					0	25	PASS	
PCB174	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB177	NA	ND	0.085	0.5	ng/wet g					0	25	PASS	
PCB180	NA	ND	0.154	0.5	ng/wet g					0	25	PASS	
PCB183	NA	ND	0.056	0.5	ng/wet g					0	25	PASS	
PCB187	NA	ND	0.168	0.5	ng/wet g					0	25	PASS	
PCB189	NA	ND	0.109	0.5	ng/wet g					0	25	PASS	
PCB194	NA	ND	0.164	0.5	ng/wet g					0	25	PASS	
PCB195	NA	ND	0.093	0.5	ng/wet g					0	25	PASS	
PCB199(200)	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB201	NA	ND	0.104	0.5	ng/wet g					0	25	PASS	
PCB203	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB206	NA	ND	0.155	0.5	ng/wet g					0	25	PASS	
PCB209	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-MS1	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
PCB003	NA	9.82	0.25	0.5	ng/wet g	8.81	0	111	50 - 150%	PASS		
PCB005	NA	9.47	0.25	0.5	ng/wet g	8.81	0	107	50 - 150%	PASS		
PCB008	NA	10.7	0.017	0.5	ng/wet g	8.81	0	121	50 - 150%	PASS		
PCB015	NA	9.77	0.25	0.5	ng/wet g	8.81	0	111	50 - 150%	PASS		
PCB018	NA	9.36	0.029	0.5	ng/wet g	8.81	0	106	50 - 150%	PASS		
PCB027	NA	8.87	0.25	0.5	ng/wet g	8.81	0	101	50 - 150%	PASS		
PCB028	NA	9.54	0.023	0.5	ng/wet g	8.81	0	108	50 - 150%	PASS		
PCB029	NA	9.73	0.25	0.5	ng/wet g	8.81	0	110	50 - 150%	PASS		
PCB031	NA	7.71	0.25	0.5	ng/wet g	8.81	0	88	50 - 150%	PASS		
PCB033	NA	10	0.25	0.5	ng/wet g	8.81	0	114	50 - 150%	PASS		
PCB037	NA	9.65	0.06	0.5	ng/wet g	8.81	0	110	50 - 150%	PASS		
PCB044	NA	8.51	0.028	0.5	ng/wet g	8.81	0	97	50 - 150%	PASS		
PCB049	NA	9.15	0.036	0.5	ng/wet g	8.81	0.636	97	50 - 150%	PASS		
PCB052	NA	8.83	0.012	0.5	ng/wet g	8.81	0.72	92	50 - 150%	PASS		
PCB056(060)	NA	8.04	0.25	0.5	ng/wet g	8.81	0	91	50 - 150%	PASS		
PCB066	NA	9.22	0.027	0.5	ng/wet g	8.81	0	105	50 - 150%	PASS		
PCB070	NA	9.1	0.023	0.5	ng/wet g	8.81	0	103	50 - 150%	PASS		
PCB074	NA	8.65	0.021	0.5	ng/wet g	8.81	0	98	50 - 150%	PASS		
PCB077	NA	9.61	0.018	0.5	ng/wet g	8.81	0	109	50 - 150%	PASS		
PCB081	NA	9.38	0.084	0.5	ng/wet g	8.81	0	106	50 - 150%	PASS		
PCB087	NA	9.29	0.081	0.5	ng/wet g	8.81	0.769	97	50 - 150%	PASS		
PCB095	NA	8.85	0.25	0.5	ng/wet g	8.81	0.603	94	50 - 150%	PASS		
PCB097	NA	10.4	0.25	0.5	ng/wet g	8.81	0.604	111	50 - 150%	PASS		
PCB099	NA	10.3	0.028	0.5	ng/wet g	8.81	2.33	90	50 - 150%	PASS		
PCB101	NA	9.35	0.027	0.5	ng/wet g	8.81	2.47	78	50 - 150%	PASS		
PCB105	NA	7.54	0.047	0.5	ng/wet g	8.81	0.465	80	50 - 150%	PASS		
PCB110	NA	9.4	0.074	0.5	ng/wet g	8.81	0.813	97	50 - 150%	PASS		
PCB114	NA	9.37	0.072	0.5	ng/wet g	8.81	0	106	50 - 150%	PASS		
PCB118	NA	11.1	0.069	0.5	ng/wet g	8.81	2.5	98	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	7.71	0.071	0.5	ng/wet g	8.81	0	88	50 - 150%	PASS			
PCB123	NA	8.87	0.018	0.5	ng/wet g	8.81	0	101	50 - 150%	PASS			
PCB126	NA	9.64	0.086	0.5	ng/wet g	8.81	0	109	50 - 150%	PASS			
PCB128	NA	9.8	0.081	0.5	ng/wet g	8.81	0	111	50 - 150%	PASS			
PCB137	NA	8.53	0.25	0.5	ng/wet g	8.81	0	97	50 - 150%	PASS			
PCB138	NA	12.1	0.057	0.5	ng/wet g	8.81	4	92	50 - 150%	PASS			
PCB141	NA	8.15	0.25	0.5	ng/wet g	8.81	0	93	50 - 150%	PASS			
PCB149	NA	9.72	0.092	0.5	ng/wet g	8.81	1.63	92	50 - 150%	PASS			
PCB151	NA	9.62	0.073	0.5	ng/wet g	8.81	0.421	104	50 - 150%	PASS			
PCB153	NA	12.5	0.065	0.5	ng/wet g	8.81	5.69	77	50 - 150%	PASS			
PCB156	NA	9.34	0.089	0.5	ng/wet g	8.81	0	106	50 - 150%	PASS			
PCB157	NA	8.23	0.103	0.5	ng/wet g	8.81	0	93	50 - 150%	PASS			
PCB158	NA	8.84	0.074	0.5	ng/wet g	8.81	0.374	96	50 - 150%	PASS			
PCB167	NA	9.48	0.049	0.5	ng/wet g	8.81	0	108	50 - 150%	PASS			
PCB168+132	NA	16.2	0.094	0.5	ng/wet g	17.6	0	92	50 - 150%	PASS			
PCB169	NA	8.66	0.116	0.5	ng/wet g	8.81	0	98	50 - 150%	PASS			
PCB170	NA	8.99	0.118	0.5	ng/wet g	8.81	0	102	50 - 150%	PASS			
PCB174	NA	8.39	0.25	0.5	ng/wet g	8.81	0	95	50 - 150%	PASS			
PCB177	NA	9.08	0.085	0.5	ng/wet g	8.81	0	103	50 - 150%	PASS			
PCB180	NA	11.2	0.154	0.5	ng/wet g	8.81	1.46	111	50 - 150%	PASS			
PCB183	NA	9.31	0.056	0.5	ng/wet g	8.81	0.617	99	50 - 150%	PASS			
PCB187	NA	10.1	0.168	0.5	ng/wet g	8.81	2.07	91	50 - 150%	PASS			
PCB189	NA	10	0.109	0.5	ng/wet g	8.81	0	114	50 - 150%	PASS			
PCB194	NA	9.43	0.164	0.5	ng/wet g	8.81	0	107	50 - 150%	PASS			
PCB195	NA	10.1	0.093	0.5	ng/wet g	8.81	0	115	50 - 150%	PASS			
PCB199(200)	NA	8.51	0.25	0.5	ng/wet g	8.81	0	97	50 - 150%	PASS			
PCB201	NA	7.47	0.104	0.5	ng/wet g	8.81	0	85	50 - 150%	PASS			
PCB203	NA	8.87	0.25	0.5	ng/wet g	8.81	0	101	50 - 150%	PASS			
PCB206	NA	10.3	0.155	0.5	ng/wet g	8.81	0	117	50 - 150%	PASS			
PCB209	NA	8.76	0.25	0.5	ng/wet g	8.81	0	99	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	
Sample ID: 62371-MS2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21066			Prepared: 07-May-19			Analyzed: 22-May-19		
PCB003	NA	9.11	0.25	0.5	ng/wet g	8.85	0	103	50 - 150%	PASS	7	25	PASS
PCB005	NA	7.92	0.25	0.5	ng/wet g	8.85	0	89	50 - 150%	PASS	18	25	PASS
PCB008	NA	10.8	0.017	0.5	ng/wet g	8.85	0	122	50 - 150%	PASS	1	25	PASS
PCB015	NA	8.8	0.25	0.5	ng/wet g	8.85	0	99	50 - 150%	PASS	11	25	PASS
PCB018	NA	10.2	0.029	0.5	ng/wet g	8.85	0	115	50 - 150%	PASS	8	25	PASS
PCB027	NA	8.69	0.25	0.5	ng/wet g	8.85	0	98	50 - 150%	PASS	3	25	PASS
PCB028	NA	9.98	0.023	0.5	ng/wet g	8.85	0	113	50 - 150%	PASS	5	25	PASS
PCB029	NA	9.51	0.25	0.5	ng/wet g	8.85	0	107	50 - 150%	PASS	3	25	PASS
PCB031	NA	8.47	0.25	0.5	ng/wet g	8.85	0	96	50 - 150%	PASS	9	25	PASS
PCB033	NA	8.97	0.25	0.5	ng/wet g	8.85	0	101	50 - 150%	PASS	12	25	PASS
PCB037	NA	9.07	0.06	0.5	ng/wet g	8.85	0	102	50 - 150%	PASS	8	25	PASS
PCB044	NA	8.64	0.028	0.5	ng/wet g	8.85	0	98	50 - 150%	PASS	1	25	PASS
PCB049	NA	9.01	0.036	0.5	ng/wet g	8.85	0.636	95	50 - 150%	PASS	2	25	PASS
PCB052	NA	9.18	0.012	0.5	ng/wet g	8.85	0.72	96	50 - 150%	PASS	4	25	PASS
PCB056(060)	NA	9.18	0.25	0.5	ng/wet g	8.85	0	104	50 - 150%	PASS	13	25	PASS
PCB066	NA	9.09	0.027	0.5	ng/wet g	8.85	0	103	50 - 150%	PASS	2	25	PASS
PCB070	NA	9.21	0.023	0.5	ng/wet g	8.85	0	104	50 - 150%	PASS	1	25	PASS
PCB074	NA	9.47	0.021	0.5	ng/wet g	8.85	0	107	50 - 150%	PASS	9	25	PASS
PCB077	NA	10.1	0.018	0.5	ng/wet g	8.85	0	114	50 - 150%	PASS	4	25	PASS
PCB081	NA	9.39	0.084	0.5	ng/wet g	8.85	0	106	50 - 150%	PASS	0	25	PASS
PCB087	NA	9.26	0.081	0.5	ng/wet g	8.85	0.769	96	50 - 150%	PASS	1	25	PASS
PCB095	NA	9.06	0.25	0.5	ng/wet g	8.85	0.603	96	50 - 150%	PASS	2	25	PASS
PCB097	NA	9.16	0.25	0.5	ng/wet g	8.85	0.604	97	50 - 150%	PASS	13	25	PASS
PCB099	NA	10.5	0.028	0.5	ng/wet g	8.85	2.33	92	50 - 150%	PASS	2	25	PASS
PCB101	NA	9.59	0.027	0.5	ng/wet g	8.85	2.47	80	50 - 150%	PASS	3	25	PASS
PCB105	NA	8.01	0.047	0.5	ng/wet g	8.85	0.465	85	50 - 150%	PASS	6	25	PASS
PCB110	NA	9.07	0.074	0.5	ng/wet g	8.85	0.813	93	50 - 150%	PASS	4	25	PASS
PCB114	NA	9.35	0.072	0.5	ng/wet g	8.85	0	106	50 - 150%	PASS	0	25	PASS
PCB118	NA	10.8	0.069	0.5	ng/wet g	8.85	2.5	94	50 - 150%	PASS	4	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	7.58	0.071	0.5	ng/wet g	8.85	0	86	50 - 150%	PASS	2	25	PASS	
PCB123	NA	8.14	0.018	0.5	ng/wet g	8.85	0	92	50 - 150%	PASS	9	25	PASS	
PCB126	NA	9.09	0.086	0.5	ng/wet g	8.85	0	103	50 - 150%	PASS	6	25	PASS	
PCB128	NA	7.58	0.081	0.5	ng/wet g	8.85	0	86	50 - 150%	PASS	25	25	PASS	
PCB137	NA	9.2	0.25	0.5	ng/wet g	8.85	0	104	50 - 150%	PASS	7	25	PASS	
PCB138	NA	11.4	0.057	0.5	ng/wet g	8.85	4	84	50 - 150%	PASS	9	25	PASS	
PCB141	NA	8.22	0.25	0.5	ng/wet g	8.85	0	93	50 - 150%	PASS	0	25	PASS	
PCB149	NA	9.79	0.092	0.5	ng/wet g	8.85	1.63	92	50 - 150%	PASS	0	25	PASS	
PCB151	NA	10.5	0.073	0.5	ng/wet g	8.85	0.421	114	50 - 150%	PASS	9	25	PASS	
PCB153	NA	12.1	0.065	0.5	ng/wet g	8.85	5.69	72	50 - 150%	PASS	7	25	PASS	
PCB156	NA	8.89	0.089	0.5	ng/wet g	8.85	0	100	50 - 150%	PASS	6	25	PASS	
PCB157	NA	7.12	0.103	0.5	ng/wet g	8.85	0	80	50 - 150%	PASS	15	25	PASS	
PCB158	NA	9.22	0.074	0.5	ng/wet g	8.85	0.374	100	50 - 150%	PASS	4	25	PASS	
PCB167	NA	10.3	0.049	0.5	ng/wet g	8.85	0	116	50 - 150%	PASS	7	25	PASS	
PCB168+132	NA	15.6	0.094	0.5	ng/wet g	17.7	0	88	50 - 150%	PASS	4	25	PASS	
PCB169	NA	9.71	0.116	0.5	ng/wet g	8.85	0	110	50 - 150%	PASS	12	25	PASS	
PCB170	NA	8.72	0.118	0.5	ng/wet g	8.85	0	99	50 - 150%	PASS	3	25	PASS	
PCB174	NA	8.37	0.25	0.5	ng/wet g	8.85	0	95	50 - 150%	PASS	0	25	PASS	
PCB177	NA	8.76	0.085	0.5	ng/wet g	8.85	0	99	50 - 150%	PASS	4	25	PASS	
PCB180	NA	9.5	0.154	0.5	ng/wet g	8.85	1.46	91	50 - 150%	PASS	20	25	PASS	
PCB183	NA	8.81	0.056	0.5	ng/wet g	8.85	0.617	93	50 - 150%	PASS	6	25	PASS	
PCB187	NA	10.1	0.168	0.5	ng/wet g	8.85	2.07	91	50 - 150%	PASS	0	25	PASS	
PCB189	NA	9.96	0.109	0.5	ng/wet g	8.85	0	113	50 - 150%	PASS	1	25	PASS	
PCB194	NA	10.4	0.164	0.5	ng/wet g	8.85	0	118	50 - 150%	PASS	10	25	PASS	
PCB195	NA	9.59	0.093	0.5	ng/wet g	8.85	0	108	50 - 150%	PASS	6	25	PASS	
PCB199(200)	NA	8.8	0.25	0.5	ng/wet g	8.85	0	99	50 - 150%	PASS	2	25	PASS	
PCB201	NA	7.11	0.104	0.5	ng/wet g	8.85	0	80	50 - 150%	PASS	6	25	PASS	
PCB203	NA	7.63	0.25	0.5	ng/wet g	8.85	0	86	50 - 150%	PASS	16	25	PASS	
PCB206	NA	9.31	0.155	0.5	ng/wet g	8.85	0	105	50 - 150%	PASS	11	25	PASS	
PCB209	NA	9.44	0.25	0.5	ng/wet g	8.85	0	107	50 - 150%	PASS	8	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-R2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19			Analyzed: 22-May-19		
PCB003	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB005	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB008	NA	ND	0.017	0.5	ng/wet g			0	25 PASS			
PCB015	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB018	NA	ND	0.029	0.5	ng/wet g			0	25 PASS			
PCB027	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB028	NA	ND	0.023	0.5	ng/wet g			0	25 PASS			
PCB029	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB031	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB033	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB037	NA	ND	0.06	0.5	ng/wet g			0	25 PASS			
PCB044	NA	ND	0.028	0.5	ng/wet g			0	25 PASS			
PCB049	NA	0.762	0.036	0.5	ng/wet g			40	25 FAIL			NH
PCB052	NA	0.797	0.012	0.5	ng/wet g			22	25 PASS			
PCB056(060)	NA	ND	0.25	0.5	ng/wet g			0	25 PASS			
PCB066	NA	ND	0.027	0.5	ng/wet g			0	25 PASS			
PCB070	NA	ND	0.023	0.5	ng/wet g			0	25 PASS			
PCB074	NA	ND	0.021	0.5	ng/wet g			0	25 PASS			
PCB077	NA	ND	0.018	0.5	ng/wet g			0	25 PASS			
PCB081	NA	ND	0.084	0.5	ng/wet g			0	25 PASS			
PCB087	NA	0.624	0.081	0.5	ng/wet g			38	25 FAIL			SL
PCB095	NA	0.604	0.25	0.5	ng/wet g			0	25 PASS			
PCB097	NA	0.721	0.25	0.5	ng/wet g			39	25 FAIL			SL
PCB099	NA	2.29	0.028	0.5	ng/wet g			3	25 PASS			
PCB101	NA	2.43	0.027	0.5	ng/wet g			3	25 PASS			
PCB105	NA	0.479	0.047	0.5	ng/wet g			6	25 PASS			J
PCB110	NA	0.759	0.074	0.5	ng/wet g			13	25 PASS			
PCB114	NA	ND	0.072	0.5	ng/wet g			0	25 PASS			
PCB118	NA	2.82	0.069	0.5	ng/wet g			25	25 PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g					0	25	PASS	
PCB123	NA	ND	0.018	0.5	ng/wet g					0	25	PASS	
PCB126	NA	ND	0.086	0.5	ng/wet g					0	25	PASS	
PCB128	NA	ND	0.081	0.5	ng/wet g					0	25	PASS	
PCB137	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB138	NA	4.31	0.057	0.5	ng/wet g					15	25	PASS	
PCB141	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB149	NA	1.59	0.092	0.5	ng/wet g					5	25	PASS	
PCB151	NA	0.432	0.073	0.5	ng/wet g					5	25	PASS	J
PCB153	NA	5.41	0.065	0.5	ng/wet g					10	25	PASS	
PCB156	NA	ND	0.089	0.5	ng/wet g					0	25	PASS	
PCB157	NA	ND	0.103	0.5	ng/wet g					0	25	PASS	
PCB158	NA	0.295	0.074	0.5	ng/wet g					42	25	FAIL	J,SL
PCB167	NA	ND	0.049	0.5	ng/wet g					0	25	PASS	
PCB168+132	NA	ND	0.094	0.5	ng/wet g					0	25	PASS	
PCB169	NA	ND	0.116	0.5	ng/wet g					0	25	PASS	
PCB170	NA	ND	0.118	0.5	ng/wet g					0	25	PASS	
PCB174	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB177	NA	ND	0.085	0.5	ng/wet g					0	25	PASS	
PCB180	NA	1.76	0.154	0.5	ng/wet g					40	25	FAIL	SL
PCB183	NA	0.637	0.056	0.5	ng/wet g					6	25	PASS	
PCB187	NA	2.14	0.168	0.5	ng/wet g					7	25	PASS	
PCB189	NA	ND	0.109	0.5	ng/wet g					0	25	PASS	
PCB194	NA	ND	0.164	0.5	ng/wet g					0	25	PASS	
PCB195	NA	ND	0.093	0.5	ng/wet g					0	25	PASS	
PCB199(200)	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB201	NA	ND	0.104	0.5	ng/wet g					0	25	PASS	
PCB203	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB206	NA	ND	0.155	0.5	ng/wet g					0	25	PASS	
PCB209	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-MS1	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19			Analyzed: 06-Jun-19		
PCB003	NA	9.8	0.25	0.5	ng/wet g	9.61	0	102	50 - 150%	PASS		
PCB005	NA	8.17	0.25	0.5	ng/wet g	9.61	0	85	50 - 150%	PASS		
PCB008	NA	10.3	0.017	0.5	ng/wet g	9.61	0	107	50 - 150%	PASS		
PCB015	NA	8.97	0.25	0.5	ng/wet g	9.61	0	93	50 - 150%	PASS		
PCB018	NA	9.73	0.029	0.5	ng/wet g	9.61	0	101	50 - 150%	PASS		
PCB027	NA	8.52	0.25	0.5	ng/wet g	9.61	0	89	50 - 150%	PASS		
PCB028	NA	11.3	0.023	0.5	ng/wet g	9.61	0	118	50 - 150%	PASS		
PCB029	NA	9.06	0.25	0.5	ng/wet g	9.61	0	94	50 - 150%	PASS		
PCB031	NA	8.14	0.25	0.5	ng/wet g	9.61	0	85	50 - 150%	PASS		
PCB033	NA	9.43	0.25	0.5	ng/wet g	9.61	0	98	50 - 150%	PASS		
PCB037	NA	9.42	0.06	0.5	ng/wet g	9.61	0	98	50 - 150%	PASS		
PCB044	NA	8.88	0.028	0.5	ng/wet g	9.61	0	92	50 - 150%	PASS		
PCB049	NA	9.54	0.036	0.5	ng/wet g	9.61	0.265	97	50 - 150%	PASS		
PCB052	NA	8.94	0.012	0.5	ng/wet g	9.61	0.34	89	50 - 150%	PASS		
PCB056(060)	NA	8.09	0.25	0.5	ng/wet g	9.61	0	84	50 - 150%	PASS		
PCB066	NA	9.62	0.027	0.5	ng/wet g	9.61	0.432	96	50 - 150%	PASS		
PCB070	NA	9.42	0.023	0.5	ng/wet g	9.61	0	98	50 - 150%	PASS		
PCB074	NA	9.68	0.021	0.5	ng/wet g	9.61	0	101	50 - 150%	PASS		
PCB077	NA	9.91	0.018	0.5	ng/wet g	9.61	0	103	50 - 150%	PASS		
PCB081	NA	9.73	0.084	0.5	ng/wet g	9.61	0	101	50 - 150%	PASS		
PCB087	NA	9.16	0.081	0.5	ng/wet g	9.61	0.425	91	50 - 150%	PASS		
PCB095	NA	8.82	0.25	0.5	ng/wet g	9.61	0	92	50 - 150%	PASS		
PCB097	NA	9.52	0.25	0.5	ng/wet g	9.61	0	99	50 - 150%	PASS		
PCB099	NA	9.25	0.028	0.5	ng/wet g	9.61	0.743	89	50 - 150%	PASS		
PCB101	NA	8.38	0.027	0.5	ng/wet g	9.61	0.566	81	50 - 150%	PASS		
PCB105	NA	10.7	0.047	0.5	ng/wet g	9.61	0	111	50 - 150%	PASS		
PCB110	NA	8.88	0.074	0.5	ng/wet g	9.61	0.272	90	50 - 150%	PASS		
PCB114	NA	9	0.072	0.5	ng/wet g	9.61	0	94	50 - 150%	PASS		
PCB118	NA	11.3	0.069	0.5	ng/wet g	9.61	0.821	109	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
PCB119	NA	7.57	0.071	0.5	ng/wet g	9.61	0	79	50 - 150%	PASS			
PCB123	NA	8.03	0.018	0.5	ng/wet g	9.61	0	84	50 - 150%	PASS			
PCB126	NA	10.6	0.086	0.5	ng/wet g	9.61	0	110	50 - 150%	PASS			
PCB128	NA	8.92	0.081	0.5	ng/wet g	9.61	0	93	50 - 150%	PASS			
PCB137	NA	9.54	0.25	0.5	ng/wet g	9.61	0	99	50 - 150%	PASS			
PCB138	NA	10.3	0.057	0.5	ng/wet g	9.61	0.995	97	50 - 150%	PASS			
PCB141	NA	9.63	0.25	0.5	ng/wet g	9.61	0	100	50 - 150%	PASS			
PCB149	NA	8.42	0.092	0.5	ng/wet g	9.61	0.309	84	50 - 150%	PASS			
PCB151	NA	9.21	0.073	0.5	ng/wet g	9.61	0	96	50 - 150%	PASS			
PCB153	NA	9.49	0.065	0.5	ng/wet g	9.61	1.32	85	50 - 150%	PASS			
PCB156	NA	10.5	0.089	0.5	ng/wet g	9.61	0	109	50 - 150%	PASS			
PCB157	NA	8.91	0.103	0.5	ng/wet g	9.61	0	93	50 - 150%	PASS			
PCB158	NA	10.9	0.074	0.5	ng/wet g	9.61	0.257	111	50 - 150%	PASS			
PCB167	NA	10.3	0.049	0.5	ng/wet g	9.61	0	107	50 - 150%	PASS			
PCB168+132	NA	20.7	0.094	0.5	ng/wet g	19.2	0	108	50 - 150%	PASS			
PCB169	NA	10.7	0.116	0.5	ng/wet g	9.61	0	111	50 - 150%	PASS			
PCB170	NA	10.1	0.118	0.5	ng/wet g	9.61	0	105	50 - 150%	PASS			
PCB174	NA	9.91	0.25	0.5	ng/wet g	9.61	0	103	50 - 150%	PASS			
PCB177	NA	9.49	0.085	0.5	ng/wet g	9.61	0	99	50 - 150%	PASS			
PCB180	NA	10.3	0.154	0.5	ng/wet g	9.61	0.393	103	50 - 150%	PASS			
PCB183	NA	10.4	0.056	0.5	ng/wet g	9.61	0.116	107	50 - 150%	PASS			
PCB187	NA	10.5	0.168	0.5	ng/wet g	9.61	0.411	105	50 - 150%	PASS			
PCB189	NA	10.2	0.109	0.5	ng/wet g	9.61	0	106	50 - 150%	PASS			
PCB194	NA	11	0.164	0.5	ng/wet g	9.61	0	114	50 - 150%	PASS			
PCB195	NA	10.3	0.093	0.5	ng/wet g	9.61	0	107	50 - 150%	PASS			
PCB199(200)	NA	8.97	0.25	0.5	ng/wet g	9.61	0	93	50 - 150%	PASS			
PCB201	NA	8.7	0.104	0.5	ng/wet g	9.61	0	91	50 - 150%	PASS			
PCB203	NA	9.22	0.25	0.5	ng/wet g	9.61	0	96	50 - 150%	PASS			
PCB206	NA	10.7	0.155	0.5	ng/wet g	9.61	0	111	50 - 150%	PASS			
PCB209	NA	9.74	0.25	0.5	ng/wet g	9.61	0	101	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	
Sample ID: 62390-MS2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068			Prepared: 08-May-19			Analyzed: 06-Jun-19		
PCB003	NA	9.24	0.25	0.5	ng/wet g	9	0	103	50 - 150%	PASS	1	25	PASS
PCB005	NA	7.63	0.25	0.5	ng/wet g	9	0	85	50 - 150%	PASS	0	25	PASS
PCB008	NA	9.77	0.017	0.5	ng/wet g	9	0	109	50 - 150%	PASS	2	25	PASS
PCB015	NA	8.82	0.25	0.5	ng/wet g	9	0	98	50 - 150%	PASS	5	25	PASS
PCB018	NA	8.44	0.029	0.5	ng/wet g	9	0	94	50 - 150%	PASS	7	25	PASS
PCB027	NA	8.33	0.25	0.5	ng/wet g	9	0	93	50 - 150%	PASS	4	25	PASS
PCB028	NA	10.3	0.023	0.5	ng/wet g	9	0	114	50 - 150%	PASS	3	25	PASS
PCB029	NA	8.75	0.25	0.5	ng/wet g	9	0	97	50 - 150%	PASS	3	25	PASS
PCB031	NA	8.57	0.25	0.5	ng/wet g	9	0	95	50 - 150%	PASS	11	25	PASS
PCB033	NA	9.44	0.25	0.5	ng/wet g	9	0	105	50 - 150%	PASS	7	25	PASS
PCB037	NA	9.52	0.06	0.5	ng/wet g	9	0	106	50 - 150%	PASS	8	25	PASS
PCB044	NA	8.61	0.028	0.5	ng/wet g	9	0	96	50 - 150%	PASS	4	25	PASS
PCB049	NA	9.23	0.036	0.5	ng/wet g	9	0.265	100	50 - 150%	PASS	3	25	PASS
PCB052	NA	9.16	0.012	0.5	ng/wet g	9	0.34	98	50 - 150%	PASS	10	25	PASS
PCB056(060)	NA	7.93	0.25	0.5	ng/wet g	9	0	88	50 - 150%	PASS	5	25	PASS
PCB066	NA	9.67	0.027	0.5	ng/wet g	9	0.432	103	50 - 150%	PASS	7	25	PASS
PCB070	NA	9.07	0.023	0.5	ng/wet g	9	0	101	50 - 150%	PASS	3	25	PASS
PCB074	NA	9.26	0.021	0.5	ng/wet g	9	0	103	50 - 150%	PASS	2	25	PASS
PCB077	NA	9.82	0.018	0.5	ng/wet g	9	0	109	50 - 150%	PASS	6	25	PASS
PCB081	NA	10.2	0.084	0.5	ng/wet g	9	0	113	50 - 150%	PASS	11	25	PASS
PCB087	NA	9.1	0.081	0.5	ng/wet g	9	0.425	96	50 - 150%	PASS	5	25	PASS
PCB095	NA	8.64	0.25	0.5	ng/wet g	9	0	96	50 - 150%	PASS	4	25	PASS
PCB097	NA	9.37	0.25	0.5	ng/wet g	9	0	104	50 - 150%	PASS	5	25	PASS
PCB099	NA	9.03	0.028	0.5	ng/wet g	9	0.743	92	50 - 150%	PASS	3	25	PASS
PCB101	NA	8.45	0.027	0.5	ng/wet g	9	0.566	88	50 - 150%	PASS	8	25	PASS
PCB105	NA	9.79	0.047	0.5	ng/wet g	9	0	109	50 - 150%	PASS	2	25	PASS
PCB110	NA	9.39	0.074	0.5	ng/wet g	9	0.272	101	50 - 150%	PASS	12	25	PASS
PCB114	NA	8.71	0.072	0.5	ng/wet g	9	0	97	50 - 150%	PASS	3	25	PASS
PCB118	NA	10.9	0.069	0.5	ng/wet g	9	0.821	112	50 - 150%	PASS	3	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	7.41	0.071	0.5	ng/wet g	9	0	82	50 - 150%	PASS	4	25	PASS	
PCB123	NA	8.22	0.018	0.5	ng/wet g	9	0	91	50 - 150%	PASS	8	25	PASS	
PCB126	NA	10.8	0.086	0.5	ng/wet g	9	0	120	50 - 150%	PASS	9	25	PASS	
PCB128	NA	9.22	0.081	0.5	ng/wet g	9	0	102	50 - 150%	PASS	9	25	PASS	
PCB137	NA	9.39	0.25	0.5	ng/wet g	9	0	104	50 - 150%	PASS	5	25	PASS	
PCB138	NA	9.76	0.057	0.5	ng/wet g	9	0.995	97	50 - 150%	PASS	0	25	PASS	
PCB141	NA	9.04	0.25	0.5	ng/wet g	9	0	100	50 - 150%	PASS	0	25	PASS	
PCB149	NA	9.24	0.092	0.5	ng/wet g	9	0.309	99	50 - 150%	PASS	16	25	PASS	
PCB151	NA	9.4	0.073	0.5	ng/wet g	9	0	104	50 - 150%	PASS	8	25	PASS	
PCB153	NA	9.03	0.065	0.5	ng/wet g	9	1.32	86	50 - 150%	PASS	1	25	PASS	
PCB156	NA	10.5	0.089	0.5	ng/wet g	9	0	117	50 - 150%	PASS	7	25	PASS	
PCB157	NA	8.53	0.103	0.5	ng/wet g	9	0	95	50 - 150%	PASS	2	25	PASS	
PCB158	NA	10.1	0.074	0.5	ng/wet g	9	0.257	109	50 - 150%	PASS	2	25	PASS	
PCB167	NA	10.6	0.049	0.5	ng/wet g	9	0	118	50 - 150%	PASS	10	25	PASS	
PCB168+132	NA	19.3	0.094	0.5	ng/wet g	18	0	107	50 - 150%	PASS	1	25	PASS	
PCB169	NA	10.7	0.116	0.5	ng/wet g	9	0	119	50 - 150%	PASS	7	25	PASS	
PCB170	NA	10.7	0.118	0.5	ng/wet g	9	0	119	50 - 150%	PASS	12	25	PASS	
PCB174	NA	9.49	0.25	0.5	ng/wet g	9	0	105	50 - 150%	PASS	2	25	PASS	
PCB177	NA	9.65	0.085	0.5	ng/wet g	9	0	107	50 - 150%	PASS	8	25	PASS	
PCB180	NA	10.1	0.154	0.5	ng/wet g	9	0.393	108	50 - 150%	PASS	5	25	PASS	
PCB183	NA	9.83	0.056	0.5	ng/wet g	9	0.116	108	50 - 150%	PASS	1	25	PASS	
PCB187	NA	10	0.168	0.5	ng/wet g	9	0.411	107	50 - 150%	PASS	2	25	PASS	
PCB189	NA	10.6	0.109	0.5	ng/wet g	9	0	118	50 - 150%	PASS	11	25	PASS	
PCB194	NA	10.9	0.164	0.5	ng/wet g	9	0	121	50 - 150%	PASS	6	25	PASS	
PCB195	NA	10.1	0.093	0.5	ng/wet g	9	0	112	50 - 150%	PASS	5	25	PASS	
PCB199(200)	NA	8.93	0.25	0.5	ng/wet g	9	0	99	50 - 150%	PASS	6	25	PASS	
PCB201	NA	7.94	0.104	0.5	ng/wet g	9	0	88	50 - 150%	PASS	3	25	PASS	
PCB203	NA	10	0.25	0.5	ng/wet g	9	0	111	50 - 150%	PASS	14	25	PASS	
PCB206	NA	10.4	0.155	0.5	ng/wet g	9	0	116	50 - 150%	PASS	4	25	PASS	
PCB209	NA	11.1	0.25	0.5	ng/wet g	9	0	123	50 - 150%	PASS	20	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-R2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**		**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19			Analyzed: 06-Jun-19		
PCB003	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB005	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB008	NA	ND	0.017	0.5	ng/wet g					0	25 PASS	
PCB015	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB018	NA	ND	0.029	0.5	ng/wet g					0	25 PASS	
PCB027	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB028	NA	ND	0.023	0.5	ng/wet g					0	25 PASS	
PCB029	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB031	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB033	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB037	NA	ND	0.06	0.5	ng/wet g					0	25 PASS	
PCB044	NA	ND	0.028	0.5	ng/wet g					0	25 PASS	
PCB049	NA	0.254	0.036	0.5	ng/wet g					9	25 PASS	J
PCB052	NA	0.325	0.012	0.5	ng/wet g					9	25 PASS	J
PCB056(060)	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB066	NA	0.401	0.027	0.5	ng/wet g					14	25 PASS	J
PCB070	NA	ND	0.023	0.5	ng/wet g					0	25 PASS	
PCB074	NA	ND	0.021	0.5	ng/wet g					0	25 PASS	
PCB077	NA	ND	0.018	0.5	ng/wet g					0	25 PASS	
PCB081	NA	ND	0.084	0.5	ng/wet g					0	25 PASS	
PCB087	NA	0.409	0.081	0.5	ng/wet g					7	25 PASS	J
PCB095	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB097	NA	ND	0.25	0.5	ng/wet g					0	25 PASS	
PCB099	NA	0.714	0.028	0.5	ng/wet g					8	25 PASS	
PCB101	NA	0.499	0.027	0.5	ng/wet g					24	25 PASS	J
PCB105	NA	ND	0.047	0.5	ng/wet g					0	25 PASS	
PCB110	NA	0.228	0.074	0.5	ng/wet g					33	25 FAIL	J,SL
PCB114	NA	ND	0.072	0.5	ng/wet g					0	25 PASS	
PCB118	NA	0.872	0.069	0.5	ng/wet g					12	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PCB Congeners — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
PCB119	NA	ND	0.071	0.5	ng/wet g					0	25	PASS	
PCB123	NA	ND	0.018	0.5	ng/wet g					0	25	PASS	
PCB126	NA	ND	0.086	0.5	ng/wet g					0	25	PASS	
PCB128	NA	ND	0.081	0.5	ng/wet g					0	25	PASS	
PCB137	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB138	NA	0.901	0.057	0.5	ng/wet g					19	25	PASS	
PCB141	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB149	NA	0.274	0.092	0.5	ng/wet g					23	25	PASS	J
PCB151	NA	ND	0.073	0.5	ng/wet g					0	25	PASS	
PCB153	NA	1.17	0.065	0.5	ng/wet g					22	25	PASS	
PCB156	NA	ND	0.089	0.5	ng/wet g					0	25	PASS	
PCB157	NA	ND	0.103	0.5	ng/wet g					0	25	PASS	
PCB158	NA	0.322	0.074	0.5	ng/wet g					51	25	FAIL	J,SL
PCB167	NA	ND	0.049	0.5	ng/wet g					0	25	PASS	
PCB168+132	NA	ND	0.094	0.5	ng/wet g					0	25	PASS	
PCB169	NA	ND	0.116	0.5	ng/wet g					0	25	PASS	
PCB170	NA	ND	0.118	0.5	ng/wet g					0	25	PASS	
PCB174	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB177	NA	ND	0.085	0.5	ng/wet g					0	25	PASS	
PCB180	NA	0.429	0.154	0.5	ng/wet g					18	25	PASS	J
PCB183	NA	0.11	0.056	0.5	ng/wet g					10	25	PASS	J
PCB187	NA	0.417	0.168	0.5	ng/wet g					3	25	PASS	J
PCB189	NA	ND	0.109	0.5	ng/wet g					0	25	PASS	
PCB194	NA	ND	0.164	0.5	ng/wet g					0	25	PASS	
PCB195	NA	ND	0.093	0.5	ng/wet g					0	25	PASS	
PCB199(200)	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB201	NA	ND	0.104	0.5	ng/wet g					0	25	PASS	
PCB203	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	
PCB206	NA	ND	0.155	0.5	ng/wet g					0	25	PASS	
PCB209	NA	ND	0.25	0.5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 03-May-19	
(DFPBDE)	NA	100			% Recovery	100	100	54 - 146%	PASS			
(FTBDE)	NA	99			% Recovery	100	99	33 - 131%	PASS			
PBDE017	NA	ND	0.05	0.1	ng/wet g							
PBDE028	NA	ND	0.05	0.1	ng/wet g							
PBDE047	NA	ND	0.05	0.1	ng/wet g							
PBDE049	NA	ND	0.05	0.1	ng/wet g							
PBDE066	NA	ND	0.05	0.1	ng/wet g							
PBDE085	NA	ND	0.05	0.1	ng/wet g							
PBDE099	NA	ND	0.05	0.1	ng/wet g							
PBDE100	NA	ND	0.05	0.1	ng/wet g							
PBDE138	NA	ND	0.05	0.1	ng/wet g							
PBDE153	NA	ND	0.05	0.1	ng/wet g							
PBDE154	NA	ND	0.05	0.1	ng/wet g							
PBDE183	NA	ND	0.05	0.1	ng/wet g							
PBDE209	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 03-May-19	
(DFPBDE)	NA	97			% Recovery	100	0	97	54 - 146%	PASS		
(FTBDE)	NA	95			% Recovery	100	0	95	33 - 131%	PASS		
PBDE017	NA	50.6	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS		
PBDE028	NA	52.2	0.05	0.1	ng/wet g	50	0	104	50 - 150%	PASS		
PBDE047	NA	48.9	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS		
PBDE049	NA	47.1	0.05	0.1	ng/wet g	50	0	94	50 - 150%	PASS		
PBDE066	NA	52.8	0.05	0.1	ng/wet g	50	0	106	50 - 150%	PASS		
PBDE085	NA	46.3	0.05	0.1	ng/wet g	50	0	93	50 - 150%	PASS		
PBDE099	NA	44.3	0.05	0.1	ng/wet g	50	0	89	50 - 150%	PASS		
PBDE100	NA	48.9	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS		
PBDE138	NA	49.8	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS		
PBDE153	NA	43.2	0.05	0.1	ng/wet g	50	0	86	50 - 150%	PASS		
PBDE154	NA	45.5	0.05	0.1	ng/wet g	50	0	91	50 - 150%	PASS		
PBDE183	NA	50.6	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS		
PBDE209	NA	176	1	5	ng/wet g	250	0	70	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 03-May-19	
(DFPBDE)	NA	103			% Recovery	100	0	103	54 - 146%	PASS	6	30	PASS
(FTBDE)	NA	96			% Recovery	100	0	96	33 - 131%	PASS	1	30	PASS
PBDE017	NA	50.9	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS	1	25	PASS
PBDE028	NA	49	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS	6	25	PASS
PBDE047	NA	48.6	0.05	0.1	ng/wet g	50	0	97	50 - 150%	PASS	1	25	PASS
PBDE049	NA	46.1	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	2	25	PASS
PBDE066	NA	50.2	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS	6	25	PASS
PBDE085	NA	47.8	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS	3	25	PASS
PBDE099	NA	45.2	0.05	0.1	ng/wet g	50	0	90	50 - 150%	PASS	1	25	PASS
PBDE100	NA	49.3	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	1	25	PASS
PBDE138	NA	47.9	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS	4	25	PASS
PBDE153	NA	46	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	7	25	PASS
PBDE154	NA	45.8	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	1	25	PASS
PBDE183	NA	53.7	0.05	0.1	ng/wet g	50	0	107	50 - 150%	PASS	6	25	PASS
PBDE209	NA	269	1	5	ng/wet g	250	0	108	50 - 150%	PASS	43	25	FAIL

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 14-May-19	
(DFPBDE)	NA	109			% Recovery	100	109	54 - 146%	PASS			
(FTBDE)	NA	95			% Recovery	100	95	33 - 131%	PASS			
PBDE017	NA	ND	0.05	0.1	ng/wet g							
PBDE028	NA	ND	0.05	0.1	ng/wet g							
PBDE047	NA	ND	0.05	0.1	ng/wet g							
PBDE049	NA	ND	0.05	0.1	ng/wet g							
PBDE066	NA	ND	0.05	0.1	ng/wet g							
PBDE085	NA	ND	0.05	0.1	ng/wet g							
PBDE099	NA	ND	0.05	0.1	ng/wet g							
PBDE100	NA	ND	0.05	0.1	ng/wet g							
PBDE138	NA	ND	0.05	0.1	ng/wet g							
PBDE153	NA	ND	0.05	0.1	ng/wet g							
PBDE154	NA	ND	0.05	0.1	ng/wet g							
PBDE183	NA	ND	0.05	0.1	ng/wet g							
PBDE209	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 14-May-19	
(DFPBDE)	NA	96			% Recovery	100	0	96	54 - 146%	PASS		
(FTBDE)	NA	89			% Recovery	100	0	89	33 - 131%	PASS		
PBDE017	NA	51.4	0.05	0.1	ng/wet g	50	0	103	50 - 150%	PASS		
PBDE028	NA	54.4	0.05	0.1	ng/wet g	50	0	109	50 - 150%	PASS		
PBDE047	NA	45.8	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS		
PBDE049	NA	42.9	0.05	0.1	ng/wet g	50	0	86	50 - 150%	PASS		
PBDE066	NA	47.8	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS		
PBDE085	NA	42.7	0.05	0.1	ng/wet g	50	0	85	50 - 150%	PASS		
PBDE099	NA	44.4	0.05	0.1	ng/wet g	50	0	89	50 - 150%	PASS		
PBDE100	NA	44.9	0.05	0.1	ng/wet g	50	0	90	50 - 150%	PASS		
PBDE138	NA	38.6	0.05	0.1	ng/wet g	50	0	77	50 - 150%	PASS		
PBDE153	NA	39.7	0.05	0.1	ng/wet g	50	0	79	50 - 150%	PASS		
PBDE154	NA	41.8	0.05	0.1	ng/wet g	50	0	84	50 - 150%	PASS		
PBDE183	NA	38.8	0.05	0.1	ng/wet g	50	0	78	50 - 150%	PASS		
PBDE209	NA	108	1	5	ng/wet g	250	0	43	50 - 150%	FAIL		1,Q

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21066		Prepared: 07-May-19					Analyzed: 15-May-19	
(DFPBDE)	NA	105			% Recovery	100	0	105	54 - 146%	PASS	9	30	PASS
(FTBDE)	NA	90			% Recovery	100	0	90	33 - 131%	PASS	1	30	PASS
PBDE017	NA	50.3	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS	2	25	PASS
PBDE028	NA	53.6	0.05	0.1	ng/wet g	50	0	107	50 - 150%	PASS	2	25	PASS
PBDE047	NA	49.4	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	7	25	PASS
PBDE049	NA	45.2	0.05	0.1	ng/wet g	50	0	90	50 - 150%	PASS	5	25	PASS
PBDE066	NA	52.4	0.05	0.1	ng/wet g	50	0	105	50 - 150%	PASS	9	25	PASS
PBDE085	NA	51	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS	18	25	PASS
PBDE099	NA	50.6	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS	13	25	PASS
PBDE100	NA	49.9	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS	11	25	PASS
PBDE138	NA	44	0.05	0.1	ng/wet g	50	0	88	50 - 150%	PASS	13	25	PASS
PBDE153	NA	43.4	0.05	0.1	ng/wet g	50	0	87	50 - 150%	PASS	10	25	PASS
PBDE154	NA	46	0.05	0.1	ng/wet g	50	0	92	50 - 150%	PASS	9	25	PASS
PBDE183	NA	44.4	0.05	0.1	ng/wet g	50	0	89	50 - 150%	PASS	13	25	PASS
PBDE209	NA	185	1	5	ng/wet g	250	0	74	50 - 150%	PASS	53	25	FAIL

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 17-May-19	
(DFPBDE)	NA	96			% Recovery	100	96	54 - 146%	PASS			
(FTBDE)	NA	86			% Recovery	100	86	33 - 131%	PASS			
PBDE017	NA	ND	0.05	0.1	ng/wet g							
PBDE028	NA	ND	0.05	0.1	ng/wet g							
PBDE047	NA	ND	0.05	0.1	ng/wet g							
PBDE049	NA	ND	0.05	0.1	ng/wet g							
PBDE066	NA	ND	0.05	0.1	ng/wet g							
PBDE085	NA	ND	0.05	0.1	ng/wet g							
PBDE099	NA	ND	0.05	0.1	ng/wet g							
PBDE100	NA	ND	0.05	0.1	ng/wet g							
PBDE138	NA	ND	0.05	0.1	ng/wet g							
PBDE153	NA	ND	0.05	0.1	ng/wet g							
PBDE154	NA	ND	0.05	0.1	ng/wet g							
PBDE183	NA	ND	0.05	0.1	ng/wet g							
PBDE209	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 17-May-19	
(DFPBDE)	NA	107			% Recovery	100	0	107	54 - 146%	PASS		
(FTBDE)	NA	87			% Recovery	100	0	87	33 - 131%	PASS		
PBDE017	NA	49.2	0.05	0.1	ng/wet g	50	0	98	50 - 150%	PASS		
PBDE028	NA	54.3	0.05	0.1	ng/wet g	50	0	109	50 - 150%	PASS		
PBDE047	NA	50.8	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS		
PBDE049	NA	46.8	0.05	0.1	ng/wet g	50	0	94	50 - 150%	PASS		
PBDE066	NA	50.9	0.05	0.1	ng/wet g	50	0	102	50 - 150%	PASS		
PBDE085	NA	52.4	0.05	0.1	ng/wet g	50	0	105	50 - 150%	PASS		
PBDE099	NA	49.8	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS		
PBDE100	NA	51.7	0.05	0.1	ng/wet g	50	0	103	50 - 150%	PASS		
PBDE138	NA	45.4	0.05	0.1	ng/wet g	50	0	91	50 - 150%	PASS		
PBDE153	NA	47.3	0.05	0.1	ng/wet g	50	0	95	50 - 150%	PASS		
PBDE154	NA	48	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS		
PBDE183	NA	47.3	0.05	0.1	ng/wet g	50	0	95	50 - 150%	PASS		
PBDE209	NA	153	1	5	ng/wet g	250	0	61	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62347-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**			**Sampled:**				**Received:**		
	Method: EPA 8270D-NCI				Batch ID: O-21068			Prepared: 08-May-19				Analyzed: 17-May-19		
(DFPBDE)	NA	104			% Recovery	100	0	104	54 - 146%	PASS	3	30	PASS	
(FTBDE)	NA	84			% Recovery	100	0	84	33 - 131%	PASS	4	30	PASS	
PBDE017	NA	49.4	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	1	25	PASS	
PBDE028	NA	54.6	0.05	0.1	ng/wet g	50	0	109	50 - 150%	PASS	0	25	PASS	
PBDE047	NA	48.7	0.05	0.1	ng/wet g	50	0	97	50 - 150%	PASS	5	25	PASS	
PBDE049	NA	40.9	0.05	0.1	ng/wet g	50	0	82	50 - 150%	PASS	14	25	PASS	
PBDE066	NA	54.1	0.05	0.1	ng/wet g	50	0	108	50 - 150%	PASS	6	25	PASS	
PBDE085	NA	49.8	0.05	0.1	ng/wet g	50	0	100	50 - 150%	PASS	5	25	PASS	
PBDE099	NA	50.3	0.05	0.1	ng/wet g	50	0	101	50 - 150%	PASS	1	25	PASS	
PBDE100	NA	49.4	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	4	25	PASS	
PBDE138	NA	47	0.05	0.1	ng/wet g	50	0	94	50 - 150%	PASS	3	25	PASS	
PBDE153	NA	46.4	0.05	0.1	ng/wet g	50	0	93	50 - 150%	PASS	2	25	PASS	
PBDE154	NA	47.8	0.05	0.1	ng/wet g	50	0	96	50 - 150%	PASS	0	25	PASS	
PBDE183	NA	49.5	0.05	0.1	ng/wet g	50	0	99	50 - 150%	PASS	4	25	PASS	
PBDE209	NA	261	1	5	ng/wet g	250	0	104	50 - 150%	PASS	52	25	FAIL	
Sample ID: 62354-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**			**Sampled:**				**Received:**		
	Method: EPA 8270D-NCI				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 03-May-19		
(DFPBDE)	NA	49			% Recovery	100		49	60 - 140%	FAIL				
(FTBDE)	NA	163			% Recovery	100		163	60 - 140%	FAIL				
PBDE028	NA	2	0.05	0.1	ng/wet g	2.26		88	50 - 150%	PASS				
PBDE047	NA	51.5	0.05	0.1	ng/wet g	73.3		70	50 - 150%	PASS				
PBDE049	NA	3.04	0.05	0.1	ng/wet g	4.01		76	50 - 150%	PASS				
PBDE066	NA	2.47	0.05	0.1	ng/wet g	1.85		134	50 - 150%	PASS				
PBDE099	NA	10.9	0.05	0.1	ng/wet g	19.2		57	50 - 150%	PASS				
PBDE100	NA	8.63	0.05	0.1	ng/wet g	17.1		50	50 - 150%	PASS				
PBDE153	NA	1.33	0.05	0.1	ng/wet g	3.83		35	50 - 150%	FAIL				1
PBDE154	NA	4.02	0.05	0.1	ng/wet g	6.88		58	50 - 150%	PASS				

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62355-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**					**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21066		Prepared: 07-May-19					Analyzed: 15-May-19	
(DFPBDE)	NA	50			% Recovery	100	50	60 - 140%	FAIL				
(FTBDE)	NA	149			% Recovery	100	149	60 - 140%	FAIL				
PBDE028	NA	2.25	0.05	0.1	ng/wet g	2.26	100	50 - 150%	PASS				
PBDE047	NA	50.2	0.05	0.1	ng/wet g	73.3	68	50 - 150%	PASS				
PBDE049	NA	3.01	0.05	0.1	ng/wet g	4.01	75	50 - 150%	PASS				
PBDE066	NA	2.46	0.05	0.1	ng/wet g	1.85	133	50 - 150%	PASS				
PBDE099	NA	9.58	0.05	0.1	ng/wet g	19.2	50	50 - 150%	PASS				
PBDE100	NA	9.06	0.05	0.1	ng/wet g	17.1	53	50 - 150%	PASS				
PBDE153	NA	1.3	0.05	0.1	ng/wet g	3.83	34	50 - 150%	FAIL				1
PBDE154	NA	3.84	0.05	0.1	ng/wet g	6.88	56	50 - 150%	PASS				
Sample ID: 62356-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**					**Received:**	
	Method: EPA 8270D-NCI				Batch ID: O-21068		Prepared: 08-May-19					Analyzed: 17-May-19	
(DFPBDE)	NA	44			% Recovery	100	44	60 - 140%	FAIL				
(FTBDE)	NA	164			% Recovery	100	164	60 - 140%	FAIL				
PBDE028	NA	1.71	0.05	0.1	ng/wet g	2.26	76	50 - 150%	PASS				
PBDE047	NA	40.6	0.05	0.1	ng/wet g	73.3	55	50 - 150%	PASS				
PBDE049	NA	2.6	0.05	0.1	ng/wet g	4.01	65	50 - 150%	PASS				
PBDE066	NA	2.27	0.05	0.1	ng/wet g	1.85	123	50 - 150%	PASS				
PBDE099	NA	9.93	0.05	0.1	ng/wet g	19.2	52	50 - 150%	PASS				
PBDE100	NA	7.76	0.05	0.1	ng/wet g	17.1	45	50 - 150%	FAIL				1
PBDE153	NA	1.47	0.05	0.1	ng/wet g	3.83	38	50 - 150%	FAIL				1
PBDE154	NA	3.53	0.05	0.1	ng/wet g	6.88	51	50 - 150%	PASS				

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS1	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
	Method: EPA 8270D-NCI				Batch ID: O-21064			Prepared: 25-Apr-19			Analyzed: 04-May-19	
(DFPBDE)	NA	58			% Recovery	100	0	58	53 - 141%		PASS	
(FTBDE)	NA	119			% Recovery	100	0	119	61 - 132%		PASS	
PBDE017	NA	11.5	0.05	0.1	ng/wet g	9.63	0	119	50 - 150%		PASS	
PBDE028	NA	10.5	0.05	0.1	ng/wet g	9.63	0.209	107	50 - 150%		PASS	
PBDE047	NA	7.76	0.05	0.1	ng/wet g	9.63	0.728	73	50 - 150%		PASS	
PBDE049	NA	7.86	0.05	0.1	ng/wet g	9.63	0	82	50 - 150%		PASS	
PBDE066	NA	7.64	0.05	0.1	ng/wet g	9.63	0	79	50 - 150%		PASS	
PBDE085	NA	4.71	0.05	0.1	ng/wet g	9.63	0	49	50 - 150%		PASS	
PBDE099	NA	5.01	0.05	0.1	ng/wet g	9.63	0.113	51	50 - 150%		PASS	
PBDE100	NA	5.64	0.05	0.1	ng/wet g	9.63	0.102	58	50 - 150%		PASS	
PBDE138	NA	3.76	0.05	0.1	ng/wet g	9.63	0	39	50 - 150%		PASS	
PBDE153	NA	3.58	0.05	0.1	ng/wet g	9.63	0	37	50 - 150%		PASS	
PBDE154	NA	4.22	0.05	0.1	ng/wet g	9.63	0	44	50 - 150%		PASS	
PBDE183	NA	3.13	0.05	0.1	ng/wet g	9.63	0	33	50 - 150%		PASS	
PBDE209	NA	19.9	1	5	ng/wet g	48.1	0	41	50 - 150%		PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D-NCI				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 04-May-19	
(DFPBDE)	NA	69			% Recovery	100	0	69	53 - 141%	PASS	17	30 PASS	
(FTBDE)	NA	109			% Recovery	100	0	109	61 - 132%	PASS	9	30 PASS	
PBDE017	NA	9.92	0.05	0.1	ng/wet g	8.79	0	113	50 - 150%	PASS	5	25 PASS	
PBDE028	NA	9.54	0.05	0.1	ng/wet g	8.79	0.209	106	50 - 150%	PASS	1	25 PASS	
PBDE047	NA	7.73	0.05	0.1	ng/wet g	8.79	0.728	80	50 - 150%	PASS	9	25 PASS	
PBDE049	NA	6.99	0.05	0.1	ng/wet g	8.79	0	80	50 - 150%	PASS	2	25 PASS	
PBDE066	NA	7.36	0.05	0.1	ng/wet g	8.79	0	84	50 - 150%	PASS	6	25 PASS	
PBDE085	NA	4.96	0.05	0.1	ng/wet g	8.79	0	56	50 - 150%	PASS	13	25 PASS	
PBDE099	NA	5.59	0.05	0.1	ng/wet g	8.79	0.113	62	50 - 150%	PASS	19	25 PASS	
PBDE100	NA	5.5	0.05	0.1	ng/wet g	8.79	0.102	61	50 - 150%	PASS	5	25 PASS	
PBDE138	NA	4	0.05	0.1	ng/wet g	8.79	0	46	50 - 150%	PASS	16	25 PASS	
PBDE153	NA	4.11	0.05	0.1	ng/wet g	8.79	0	47	50 - 150%	PASS	24	25 PASS	
PBDE154	NA	4.76	0.05	0.1	ng/wet g	8.79	0	54	50 - 150%	PASS	20	25 PASS	
PBDE183	NA	3.49	0.05	0.1	ng/wet g	8.79	0	40	50 - 150%	PASS	19	25 PASS	
PBDE209	NA	19.5	1	5	ng/wet g	43.9	0	44	50 - 150%	PASS	7	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62367-R2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**			
	Method: EPA 8270D-NCI				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 04-May-19			
(DFPBDE)	NA	81			% Recovery	100	81	53 - 141%	PASS		16	30	PASS	
(FTBDE)	NA	121			% Recovery	100	121	61 - 132%	PASS		5	30	PASS	
PBDE017	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE028	NA	0.203	0.05	0.1	ng/wet g						5	25	PASS	
PBDE047	NA	0.631	0.05	0.1	ng/wet g						27	25	FAIL	Q
PBDE049	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE066	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE085	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE099	NA	0.121	0.05	0.1	ng/wet g						14	25	PASS	
PBDE100	NA	0.0698	0.05	0.1	ng/wet g						63	25	FAIL	J,SL
PBDE138	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE153	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE154	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE183	NA	ND	0.05	0.1	ng/wet g						0	25	PASS	
PBDE209	NA	ND	1	5	ng/wet g						0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-MS1	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D-NCI				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 15-May-19	
(DFPBDE)	NA	78			% Recovery	100	0	78	53 - 141%	PASS		
(FTBDE)	NA	105			% Recovery	100	0	105	61 - 132%	PASS		
PBDE017	NA	9.73	0.05	0.1	ng/wet g	8.81	0	110	50 - 150%	PASS		
PBDE028	NA	10.6	0.05	0.1	ng/wet g	8.81	0	120	50 - 150%	PASS		
PBDE047	NA	8.1	0.05	0.1	ng/wet g	8.81	0.5	86	50 - 150%	PASS		
PBDE049	NA	9.81	0.05	0.1	ng/wet g	8.81	0	111	50 - 150%	PASS		
PBDE066	NA	8.1	0.05	0.1	ng/wet g	8.81	0	92	50 - 150%	PASS		
PBDE085	NA	6.28	0.05	0.1	ng/wet g	8.81	0	71	50 - 150%	PASS		
PBDE099	NA	7.01	0.05	0.1	ng/wet g	8.81	0.473	74	50 - 150%	PASS		
PBDE100	NA	6.94	0.05	0.1	ng/wet g	8.81	0.244	76	50 - 150%	PASS		
PBDE138	NA	4.55	0.05	0.1	ng/wet g	8.81	0	52	50 - 150%	PASS		
PBDE153	NA	4.61	0.05	0.1	ng/wet g	8.81	0	52	50 - 150%	PASS		
PBDE154	NA	5.33	0.05	0.1	ng/wet g	8.81	0	60	50 - 150%	PASS		
PBDE183	NA	3.66	0.05	0.1	ng/wet g	8.81	0	42	50 - 150%	PASS		
PBDE209	NA	23.8	1	5	ng/wet g	44	0	54	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-MS2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D-NCI				Batch ID: O-21066			Prepared: 07-May-19				Analyzed: 15-May-19	
(DFPBDE)	NA	85			% Recovery	100	0	85	53 - 141%	PASS	9	30 PASS	
(FTBDE)	NA	95			% Recovery	100	0	95	61 - 132%	PASS	10	30 PASS	
PBDE017	NA	9.43	0.05	0.1	ng/wet g	8.85	0	107	50 - 150%	PASS	3	25 PASS	
PBDE028	NA	10	0.05	0.1	ng/wet g	8.85	0	113	50 - 150%	PASS	6	25 PASS	
PBDE047	NA	8.34	0.05	0.1	ng/wet g	8.85	0.5	89	50 - 150%	PASS	3	25 PASS	
PBDE049	NA	9.33	0.05	0.1	ng/wet g	8.85	0	105	50 - 150%	PASS	6	25 PASS	
PBDE066	NA	9.05	0.05	0.1	ng/wet g	8.85	0	102	50 - 150%	PASS	10	25 PASS	
PBDE085	NA	6.9	0.05	0.1	ng/wet g	8.85	0	78	50 - 150%	PASS	9	25 PASS	
PBDE099	NA	7.24	0.05	0.1	ng/wet g	8.85	0.473	76	50 - 150%	PASS	3	25 PASS	
PBDE100	NA	7.37	0.05	0.1	ng/wet g	8.85	0.244	81	50 - 150%	PASS	6	25 PASS	
PBDE138	NA	4.76	0.05	0.1	ng/wet g	8.85	0	54	50 - 150%	PASS	4	25 PASS	
PBDE153	NA	4.93	0.05	0.1	ng/wet g	8.85	0	56	50 - 150%	PASS	7	25 PASS	
PBDE154	NA	6.1	0.05	0.1	ng/wet g	8.85	0	69	50 - 150%	PASS	14	25 PASS	
PBDE183	NA	4.07	0.05	0.1	ng/wet g	8.85	0	46	50 - 150%	PASS	9	25 PASS	
PBDE209	NA	27.5	1	5	ng/wet g	44.2	0	62	50 - 150%	PASS	14	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62371-R2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D-NCI				Batch ID: O-21066			Prepared: 07-May-19				Analyzed: 15-May-19		
(DFPBDE)	NA	73			% Recovery	100	73	53 - 141%	PASS	24	30	PASS	
(FTBDE)	NA	105			% Recovery	100	105	61 - 132%	PASS	6	30	PASS	
PBDE017	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE028	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE047	NA	0.691	0.05	0.1	ng/wet g					77	25	FAIL	SL
PBDE049	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE066	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE085	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE099	NA	0.649	0.05	0.1	ng/wet g					74	25	FAIL	SL
PBDE100	NA	0.281	0.05	0.1	ng/wet g					30	25	FAIL	SL,Q
PBDE138	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE153	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE154	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE183	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE209	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-MS1	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
	Method: EPA 8270D-NCI				Batch ID: O-21068			Prepared: 08-May-19			Analyzed: 17-May-19	
(DFPBDE)	NA	52			% Recovery	100	0	52	53 - 141%	FAIL		M
(FTBDE)	NA	110			% Recovery	100	0	110	61 - 132%	PASS		
PBDE017	NA	10.2	0.05	0.1	ng/wet g	9.61	0	106	50 - 150%	PASS		
PBDE028	NA	10.7	0.05	0.1	ng/wet g	9.61	0	111	50 - 150%	PASS		
PBDE047	NA	6.99	0.05	0.1	ng/wet g	9.61	0	73	50 - 150%	PASS		
PBDE049	NA	8.07	0.05	0.1	ng/wet g	9.61	0	84	50 - 150%	PASS		
PBDE066	NA	7.21	0.05	0.1	ng/wet g	9.61	0	75	50 - 150%	PASS		
PBDE085	NA	3.98	0.05	0.1	ng/wet g	9.61	0	41	50 - 150%	PASS		
PBDE099	NA	4.72	0.05	0.1	ng/wet g	9.61	0	49	50 - 150%	PASS		
PBDE100	NA	5.14	0.05	0.1	ng/wet g	9.61	0	53	50 - 150%	PASS		
PBDE138	NA	2.48	0.05	0.1	ng/wet g	9.61	0	26	50 - 150%	PASS		
PBDE153	NA	2.78	0.05	0.1	ng/wet g	9.61	0	29	50 - 150%	PASS		
PBDE154	NA	3.19	0.05	0.1	ng/wet g	9.61	0	33	50 - 150%	PASS		
PBDE183	NA	2.02	0.05	0.1	ng/wet g	9.61	0	21	50 - 150%	PASS		
PBDE209	NA	19.8	1	5	ng/wet g	48.1	0	41	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62390-MS2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D-NCI				Batch ID: O-21068			Prepared: 08-May-19				Analyzed: 17-May-19		
(DFPBDE)	NA	57			% Recovery	100	0	57	53 - 141%	PASS	9	30	PASS	
(FTBDE)	NA	115			% Recovery	100	0	115	61 - 132%	PASS	4	30	PASS	
PBDE017	NA	10.1	0.05	0.1	ng/wet g	9	0	112	50 - 150%	PASS	6	25	PASS	
PBDE028	NA	10.4	0.05	0.1	ng/wet g	9	0	116	50 - 150%	PASS	4	25	PASS	
PBDE047	NA	7.11	0.05	0.1	ng/wet g	9	0	79	50 - 150%	PASS	8	25	PASS	
PBDE049	NA	7.56	0.05	0.1	ng/wet g	9	0	84	50 - 150%	PASS	0	25	PASS	
PBDE066	NA	7.2	0.05	0.1	ng/wet g	9	0	80	50 - 150%	PASS	6	25	PASS	
PBDE085	NA	3.71	0.05	0.1	ng/wet g	9	0	41	50 - 150%	PASS	0	25	PASS	
PBDE099	NA	4.31	0.05	0.1	ng/wet g	9	0	48	50 - 150%	PASS	2	25	PASS	
PBDE100	NA	5.07	0.05	0.1	ng/wet g	9	0	56	50 - 150%	PASS	6	25	PASS	
PBDE138	NA	1.94	0.05	0.1	ng/wet g	9	0	22	50 - 150%	PASS	17	25	PASS	
PBDE153	NA	2.53	0.05	0.1	ng/wet g	9	0	28	50 - 150%	PASS	4	25	PASS	
PBDE154	NA	3.03	0.05	0.1	ng/wet g	9	0	34	50 - 150%	PASS	3	25	PASS	
PBDE183	NA	1.53	0.05	0.1	ng/wet g	9	0	17	50 - 150%	PASS	21	25	PASS	
PBDE209	NA	9.16	1	5	ng/wet g	45	0	20	50 - 150%	PASS	69	25	FAIL	M

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

PolyBrominated Diphenyl Ethers QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-R2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D-NCI				Batch ID: O-21068			Prepared: 08-May-19				Analyzed: 17-May-19	
(DFPBDE)	NA	78			% Recovery	100	78	53 - 141%	PASS	26	30	PASS	
(FTBDE)	NA	92			% Recovery	100	92	61 - 132%	PASS	21	30	PASS	
PBDE017	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE028	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE047	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE049	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE066	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE085	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE099	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE100	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE138	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE153	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE154	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE183	NA	ND	0.05	0.1	ng/wet g					0	25	PASS	
PBDE209	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	91			% Recovery	100	91	27 - 133%	PASS			
(d10-Phenanthrene)	NA	105			% Recovery	100	105	43 - 129%	PASS			
(d12-Chrysene)	NA	116			% Recovery	100	116	62 - 131%	PASS			
(d12-Perylene)	NA	105			% Recovery	100	105	50 - 150%	PASS			
(d8-Naphthalene)	NA	68			% Recovery	100	68	5 - 139%	PASS			
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylphenanthrene	NA	ND	1	5	ng/wet g							
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g							
2-Methylnaphthalene	NA	ND	1	5	ng/wet g							
Acenaphthene	NA	ND	1	5	ng/wet g							
Acenaphthylene	NA	ND	1	5	ng/wet g							
Anthracene	NA	ND	1	5	ng/wet g							
Benz[a]anthracene	NA	ND	1	5	ng/wet g							
Benzo[a]pyrene	NA	ND	1	5	ng/wet g							
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g							
Benzo[e]pyrene	NA	ND	1	5	ng/wet g							
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g							
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g							
Biphenyl	NA	ND	1	5	ng/wet g							
Chrysene	NA	ND	1	5	ng/wet g							
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g							
Dibenzothiophene	NA	ND	1	5	ng/wet g							
Fluoranthene	NA	ND	1	5	ng/wet g							
Fluorene	NA	ND	1	5	ng/wet g							
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g							
Naphthalene	NA	ND	1	5	ng/wet g							
Perylene	NA	ND	1	5	ng/wet g							
Phenanthrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19				Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	93			% Recovery	100	0	93	27 - 133%	PASS		
(d10-Phenanthrene)	NA	101			% Recovery	100	0	101	43 - 129%	PASS		
(d12-Chrysene)	NA	109			% Recovery	100	0	109	62 - 131%	PASS		
(d12-Perylene)	NA	103			% Recovery	100	0	103	50 - 150%	PASS		
(d8-Naphthalene)	NA	77			% Recovery	100	0	77	5 - 139%	PASS		
1,6,7-Trimethylnaphthalene	NA	474	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
1-Methylnaphthalene	NA	414	1	5	ng/wet g	500	0	83	50 - 150%	PASS		
1-Methylphenanthrene	NA	524	1	5	ng/wet g	500	0	105	50 - 150%	PASS		
2,6-Dimethylnaphthalene	NA	449	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
2-Methylnaphthalene	NA	434	1	5	ng/wet g	500	0	87	50 - 150%	PASS		
Acenaphthene	NA	452	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
Acenaphthylene	NA	448	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
Anthracene	NA	489	1	5	ng/wet g	500	0	98	50 - 150%	PASS		
Benz[a]anthracene	NA	533	1	5	ng/wet g	500	0	107	50 - 150%	PASS		
Benzo[a]pyrene	NA	506	1	5	ng/wet g	500	0	101	50 - 150%	PASS		
Benzo[b]fluoranthene	NA	515	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Benzo[e]pyrene	NA	513	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Benzo[g,h,i]perylene	NA	509	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Benzo[k]fluoranthene	NA	520	1	5	ng/wet g	500	0	104	50 - 150%	PASS		
Biphenyl	NA	423	1	5	ng/wet g	500	0	85	50 - 150%	PASS		
Chrysene	NA	517	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Dibenz[a,h]anthracene	NA	512	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Dibenzothiophene	NA	500	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Fluoranthene	NA	512	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Fluorene	NA	483	1	5	ng/wet g	500	0	97	50 - 150%	PASS		
Indeno[1,2,3-cd]pyrene	NA	511	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Naphthalene	NA	402	1	5	ng/wet g	500	0	80	50 - 150%	PASS		
Perylene	NA	489	1	5	ng/wet g	500	0	98	50 - 150%	PASS		
Phenanthrene	NA	519	1	5	ng/wet g	500	0	104	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	508	1	5	ng/wet g	500	0	102	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D				Batch ID: O-21064		Prepared: 25-Apr-19					Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	87			% Recovery	100	0	87	27 - 133%	PASS	7	30 PASS	
(d10-Phenanthrene)	NA	103			% Recovery	100	0	103	43 - 129%	PASS	2	30 PASS	
(d12-Chrysene)	NA	111			% Recovery	100	0	111	62 - 131%	PASS	2	30 PASS	
(d12-Perylene)	NA	104			% Recovery	100	0	104	50 - 150%	PASS	1	30 PASS	
(d8-Naphthalene)	NA	54			% Recovery	100	0	54	5 - 139%	PASS	35	30 FAIL	
1,6,7-Trimethylnaphthalene	NA	450	1	5	ng/wet g	500	0	90	50 - 150%	PASS	5	25 PASS	
1-Methylnaphthalene	NA	334	1	5	ng/wet g	500	0	67	50 - 150%	PASS	21	25 PASS	
1-Methylphenanthrene	NA	526	1	5	ng/wet g	500	0	105	50 - 150%	PASS	0	25 PASS	
2,6-Dimethylnaphthalene	NA	399	1	5	ng/wet g	500	0	80	50 - 150%	PASS	12	25 PASS	
2-Methylnaphthalene	NA	341	1	5	ng/wet g	500	0	68	50 - 150%	PASS	25	25 PASS	
Acenaphthene	NA	407	1	5	ng/wet g	500	0	81	50 - 150%	PASS	11	25 PASS	
Acenaphthylene	NA	399	1	5	ng/wet g	500	0	80	50 - 150%	PASS	12	25 PASS	
Anthracene	NA	476	1	5	ng/wet g	500	0	95	50 - 150%	PASS	3	25 PASS	
Benz[a]anthracene	NA	540	1	5	ng/wet g	500	0	108	50 - 150%	PASS	1	25 PASS	
Benzo[a]pyrene	NA	503	1	5	ng/wet g	500	0	101	50 - 150%	PASS	0	25 PASS	
Benzo[b]fluoranthene	NA	517	1	5	ng/wet g	500	0	103	50 - 150%	PASS	0	25 PASS	
Benzo[e]pyrene	NA	516	1	5	ng/wet g	500	0	103	50 - 150%	PASS	0	25 PASS	
Benzo[g,h,i]perylene	NA	505	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25 PASS	
Benzo[k]fluoranthene	NA	513	1	5	ng/wet g	500	0	103	50 - 150%	PASS	1	25 PASS	
Biphenyl	NA	368	1	5	ng/wet g	500	0	74	50 - 150%	PASS	14	25 PASS	
Chrysene	NA	521	1	5	ng/wet g	500	0	104	50 - 150%	PASS	1	25 PASS	
Dibenz[a,h]anthracene	NA	513	1	5	ng/wet g	500	0	103	50 - 150%	PASS	1	25 PASS	
Dibenzothiophene	NA	489	1	5	ng/wet g	500	0	98	50 - 150%	PASS	2	25 PASS	
Fluoranthene	NA	512	1	5	ng/wet g	500	0	102	50 - 150%	PASS	0	25 PASS	
Fluorene	NA	456	1	5	ng/wet g	500	0	91	50 - 150%	PASS	6	25 PASS	
Indeno[1,2,3-cd]pyrene	NA	510	1	5	ng/wet g	500	0	102	50 - 150%	PASS	0	25 PASS	
Naphthalene	NA	278	1	5	ng/wet g	500	0	56	50 - 150%	PASS	35	25 FAIL	
Perylene	NA	492	1	5	ng/wet g	500	0	98	50 - 150%	PASS	0	25 PASS	
Phenanthrene	NA	504	1	5	ng/wet g	500	0	101	50 - 150%	PASS	3	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	507	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
(d10-Acenaphthene)	NA	98			% Recovery	100	98	27 - 133%	PASS			
(d10-Phenanthrene)	NA	108			% Recovery	100	108	43 - 129%	PASS			
(d12-Chrysene)	NA	116			% Recovery	100	116	62 - 131%	PASS			
(d12-Perylene)	NA	112			% Recovery	100	112	50 - 150%	PASS			
(d8-Naphthalene)	NA	79			% Recovery	100	79	5 - 139%	PASS			
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylphenanthrene	NA	ND	1	5	ng/wet g							
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g							
2-Methylnaphthalene	NA	ND	1	5	ng/wet g							
Acenaphthene	NA	ND	1	5	ng/wet g							
Acenaphthylene	NA	ND	1	5	ng/wet g							
Anthracene	NA	ND	1	5	ng/wet g							
Benz[a]anthracene	NA	ND	1	5	ng/wet g							
Benzo[a]pyrene	NA	ND	1	5	ng/wet g							
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g							
Benzo[e]pyrene	NA	ND	1	5	ng/wet g							
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g							
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g							
Biphenyl	NA	ND	1	5	ng/wet g							
Chrysene	NA	ND	1	5	ng/wet g							
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g							
Dibenzothiophene	NA	ND	1	5	ng/wet g							
Fluoranthene	NA	ND	1	5	ng/wet g							
Fluorene	NA	ND	1	5	ng/wet g							
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g							
Naphthalene	NA	ND	1	5	ng/wet g							
Perylene	NA	ND	1	5	ng/wet g							
Phenanthrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19				Analyzed: 22-May-19	
(d10-Acenaphthene)	NA	97			% Recovery	100	0	97	27 - 133%		PASS	
(d10-Phenanthrene)	NA	102			% Recovery	100	0	102	43 - 129%		PASS	
(d12-Chrysene)	NA	108			% Recovery	100	0	108	62 - 131%		PASS	
(d12-Perylene)	NA	110			% Recovery	100	0	110	50 - 150%		PASS	
(d8-Naphthalene)	NA	87			% Recovery	100	0	87	5 - 139%		PASS	
1,6,7-Trimethylnaphthalene	NA	458	1	5	ng/wet g	500	0	92	50 - 150%		PASS	
1-Methylnaphthalene	NA	413	1	5	ng/wet g	500	0	83	50 - 150%		PASS	
1-Methylphenanthrene	NA	526	1	5	ng/wet g	500	0	105	50 - 150%		PASS	
2,6-Dimethylnaphthalene	NA	430	1	5	ng/wet g	500	0	86	50 - 150%		PASS	
2-Methylnaphthalene	NA	422	1	5	ng/wet g	500	0	84	50 - 150%		PASS	
Acenaphthene	NA	434	1	5	ng/wet g	500	0	87	50 - 150%		PASS	
Acenaphthylene	NA	447	1	5	ng/wet g	500	0	89	50 - 150%		PASS	
Anthracene	NA	441	1	5	ng/wet g	500	0	88	50 - 150%		PASS	
Benz[a]anthracene	NA	528	1	5	ng/wet g	500	0	106	50 - 150%		PASS	
Benzo[a]pyrene	NA	475	1	5	ng/wet g	500	0	95	50 - 150%		PASS	
Benzo[b]fluoranthene	NA	506	1	5	ng/wet g	500	0	101	50 - 150%		PASS	
Benzo[e]pyrene	NA	501	1	5	ng/wet g	500	0	100	50 - 150%		PASS	
Benzo[g,h,i]perylene	NA	473	1	5	ng/wet g	500	0	95	50 - 150%		PASS	
Benzo[k]fluoranthene	NA	490	1	5	ng/wet g	500	0	98	50 - 150%		PASS	
Biphenyl	NA	420	1	5	ng/wet g	500	0	84	50 - 150%		PASS	
Chrysene	NA	467	1	5	ng/wet g	500	0	93	50 - 150%		PASS	
Dibenz[a,h]anthracene	NA	506	1	5	ng/wet g	500	0	101	50 - 150%		PASS	
Dibenzothiophene	NA	455	1	5	ng/wet g	500	0	91	50 - 150%		PASS	
Fluoranthene	NA	494	1	5	ng/wet g	500	0	99	50 - 150%		PASS	
Fluorene	NA	459	1	5	ng/wet g	500	0	92	50 - 150%		PASS	
Indeno[1,2,3-cd]pyrene	NA	526	1	5	ng/wet g	500	0	105	50 - 150%		PASS	
Naphthalene	NA	404	1	5	ng/wet g	500	0	81	50 - 150%		PASS	
Perylene	NA	477	1	5	ng/wet g	500	0	95	50 - 150%		PASS	
Phenanthrene	NA	464	1	5	ng/wet g	500	0	93	50 - 150%		PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	488	1	5	ng/wet g	500	0	98	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62346-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D				Batch ID: O-21066		Prepared: 07-May-19					Analyzed: 22-May-19	
(d10-Acenaphthene)	NA	98			% Recovery	100	0	98	27 - 133%	PASS	1	30 PASS	
(d10-Phenanthrene)	NA	106			% Recovery	100	0	106	43 - 129%	PASS	4	30 PASS	
(d12-Chrysene)	NA	107			% Recovery	100	0	107	62 - 131%	PASS	1	30 PASS	
(d12-Perylene)	NA	114			% Recovery	100	0	114	50 - 150%	PASS	4	30 PASS	
(d8-Naphthalene)	NA	88			% Recovery	100	0	88	5 - 139%	PASS	1	30 PASS	
1,6,7-Trimethylnaphthalene	NA	469	1	5	ng/wet g	500	0	94	50 - 150%	PASS	2	25 PASS	
1-Methylnaphthalene	NA	420	1	5	ng/wet g	500	0	84	50 - 150%	PASS	1	25 PASS	
1-Methylphenanthrene	NA	538	1	5	ng/wet g	500	0	108	50 - 150%	PASS	3	25 PASS	
2,6-Dimethylnaphthalene	NA	441	1	5	ng/wet g	500	0	88	50 - 150%	PASS	2	25 PASS	
2-Methylnaphthalene	NA	426	1	5	ng/wet g	500	0	85	50 - 150%	PASS	1	25 PASS	
Acenaphthene	NA	446	1	5	ng/wet g	500	0	89	50 - 150%	PASS	2	25 PASS	
Acenaphthylene	NA	461	1	5	ng/wet g	500	0	92	50 - 150%	PASS	3	25 PASS	
Anthracene	NA	471	1	5	ng/wet g	500	0	94	50 - 150%	PASS	7	25 PASS	
Benz[a]anthracene	NA	540	1	5	ng/wet g	500	0	108	50 - 150%	PASS	2	25 PASS	
Benzo[a]pyrene	NA	503	1	5	ng/wet g	500	0	101	50 - 150%	PASS	6	25 PASS	
Benzo[b]fluoranthene	NA	517	1	5	ng/wet g	500	0	103	50 - 150%	PASS	2	25 PASS	
Benzo[e]pyrene	NA	515	1	5	ng/wet g	500	0	103	50 - 150%	PASS	3	25 PASS	
Benzo[g,h,i]perylene	NA	490	1	5	ng/wet g	500	0	98	50 - 150%	PASS	3	25 PASS	
Benzo[k]fluoranthene	NA	496	1	5	ng/wet g	500	0	99	50 - 150%	PASS	1	25 PASS	
Biphenyl	NA	426	1	5	ng/wet g	500	0	85	50 - 150%	PASS	1	25 PASS	
Chrysene	NA	468	1	5	ng/wet g	500	0	94	50 - 150%	PASS	1	25 PASS	
Dibenz[a,h]anthracene	NA	521	1	5	ng/wet g	500	0	104	50 - 150%	PASS	3	25 PASS	
Dibenzothiophene	NA	476	1	5	ng/wet g	500	0	95	50 - 150%	PASS	4	25 PASS	
Fluoranthene	NA	516	1	5	ng/wet g	500	0	103	50 - 150%	PASS	4	25 PASS	
Fluorene	NA	475	1	5	ng/wet g	500	0	95	50 - 150%	PASS	3	25 PASS	
Indeno[1,2,3-cd]pyrene	NA	544	1	5	ng/wet g	500	0	109	50 - 150%	PASS	4	25 PASS	
Naphthalene	NA	415	1	5	ng/wet g	500	0	83	50 - 150%	PASS	2	25 PASS	
Perylene	NA	494	1	5	ng/wet g	500	0	99	50 - 150%	PASS	4	25 PASS	
Phenanthrene	NA	482	1	5	ng/wet g	500	0	96	50 - 150%	PASS	3	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	518	1	5	ng/wet g	500	0	104	50 - 150%	PASS	6	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 06-Jun-19	
(d10-Acenaphthene)	NA	75			% Recovery	100	75	27 - 133%	PASS			
(d10-Phenanthrene)	NA	84			% Recovery	100	84	43 - 129%	PASS			
(d12-Chrysene)	NA	85			% Recovery	100	85	62 - 131%	PASS			
(d12-Perylene)	NA	89			% Recovery	100	89	50 - 150%	PASS			
(d8-Naphthalene)	NA	66			% Recovery	100	66	5 - 139%	PASS			
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylnaphthalene	NA	ND	1	5	ng/wet g							
1-Methylphenanthrene	NA	ND	1	5	ng/wet g							
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g							
2-Methylnaphthalene	NA	ND	1	5	ng/wet g							
Acenaphthene	NA	ND	1	5	ng/wet g							
Acenaphthylene	NA	ND	1	5	ng/wet g							
Anthracene	NA	ND	1	5	ng/wet g							
Benz[a]anthracene	NA	ND	1	5	ng/wet g							
Benzo[a]pyrene	NA	ND	1	5	ng/wet g							
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g							
Benzo[e]pyrene	NA	ND	1	5	ng/wet g							
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g							
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g							
Biphenyl	NA	ND	1	5	ng/wet g							
Chrysene	NA	ND	1	5	ng/wet g							
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g							
Dibenzothiophene	NA	ND	1	5	ng/wet g							
Fluoranthene	NA	ND	1	5	ng/wet g							
Fluorene	NA	ND	1	5	ng/wet g							
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g							
Naphthalene	NA	ND	1	5	ng/wet g							
Perylene	NA	ND	1	5	ng/wet g							
Phenanthrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g							

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-BS1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19				Analyzed: 06-Jun-19	
(d10-Acenaphthene)	NA	69			% Recovery	100	0	69	27 - 133%	PASS		
(d10-Phenanthrene)	NA	75			% Recovery	100	0	75	43 - 129%	PASS		
(d12-Chrysene)	NA	73			% Recovery	100	0	73	62 - 131%	PASS		
(d12-Perylene)	NA	83			% Recovery	100	0	83	50 - 150%	PASS		
(d8-Naphthalene)	NA	68			% Recovery	100	0	68	5 - 139%	PASS		
1,6,7-Trimethylnaphthalene	NA	484	1	5	ng/wet g	500	0	97	50 - 150%	PASS		
1-Methylnaphthalene	NA	400	1	5	ng/wet g	500	0	80	50 - 150%	PASS		
1-Methylphenanthrene	NA	539	1	5	ng/wet g	500	0	108	50 - 150%	PASS		
2,6-Dimethylnaphthalene	NA	447	1	5	ng/wet g	500	0	89	50 - 150%	PASS		
2-Methylnaphthalene	NA	411	1	5	ng/wet g	500	0	82	50 - 150%	PASS		
Acenaphthene	NA	450	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
Acenaphthylene	NA	449	1	5	ng/wet g	500	0	90	50 - 150%	PASS		
Anthracene	NA	477	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
Benz[a]anthracene	NA	515	1	5	ng/wet g	500	0	103	50 - 150%	PASS		
Benzo[a]pyrene	NA	488	1	5	ng/wet g	500	0	98	50 - 150%	PASS		
Benzo[b]fluoranthene	NA	511	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Benzo[e]pyrene	NA	500	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Benzo[g,h,i]perylene	NA	504	1	5	ng/wet g	500	0	101	50 - 150%	PASS		
Benzo[k]fluoranthene	NA	499	1	5	ng/wet g	500	0	100	50 - 150%	PASS		
Biphenyl	NA	418	1	5	ng/wet g	500	0	84	50 - 150%	PASS		
Chrysene	NA	479	1	5	ng/wet g	500	0	96	50 - 150%	PASS		
Dibenz[a,h]anthracene	NA	550	1	5	ng/wet g	500	0	110	50 - 150%	PASS		
Dibenzothiophene	NA	479	1	5	ng/wet g	500	0	96	50 - 150%	PASS		
Fluoranthene	NA	508	1	5	ng/wet g	500	0	102	50 - 150%	PASS		
Fluorene	NA	483	1	5	ng/wet g	500	0	97	50 - 150%	PASS		
Indeno[1,2,3-cd]pyrene	NA	545	1	5	ng/wet g	500	0	109	50 - 150%	PASS		
Naphthalene	NA	374	1	5	ng/wet g	500	0	75	50 - 150%	PASS		
Perylene	NA	475	1	5	ng/wet g	500	0	95	50 - 150%	PASS		
Phenanthrene	NA	518	1	5	ng/wet g	500	0	104	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	509	1	5	ng/wet g	500	0	102	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62347-BS2	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**					**Received:**	
	Method: EPA 8270D				Batch ID: O-21068		Prepared: 08-May-19					Analyzed: 06-Jun-19	
(d10-Acenaphthene)	NA	78			% Recovery	100	0	78	27 - 133%	PASS	12	30	PASS
(d10-Phenanthrene)	NA	84			% Recovery	100	0	84	43 - 129%	PASS	11	30	PASS
(d12-Chrysene)	NA	78			% Recovery	100	0	78	62 - 131%	PASS	7	30	PASS
(d12-Perylene)	NA	90			% Recovery	100	0	90	50 - 150%	PASS	8	30	PASS
(d8-Naphthalene)	NA	72			% Recovery	100	0	72	5 - 139%	PASS	6	30	PASS
1,6,7-Trimethylnaphthalene	NA	485	1	5	ng/wet g	500	0	97	50 - 150%	PASS	0	25	PASS
1-Methylnaphthalene	NA	402	1	5	ng/wet g	500	0	80	50 - 150%	PASS	0	25	PASS
1-Methylphenanthrene	NA	533	1	5	ng/wet g	500	0	107	50 - 150%	PASS	1	25	PASS
2,6-Dimethylnaphthalene	NA	447	1	5	ng/wet g	500	0	89	50 - 150%	PASS	0	25	PASS
2-Methylnaphthalene	NA	413	1	5	ng/wet g	500	0	83	50 - 150%	PASS	1	25	PASS
Acenaphthene	NA	446	1	5	ng/wet g	500	0	89	50 - 150%	PASS	1	25	PASS
Acenaphthylene	NA	460	1	5	ng/wet g	500	0	92	50 - 150%	PASS	2	25	PASS
Anthracene	NA	475	1	5	ng/wet g	500	0	95	50 - 150%	PASS	0	25	PASS
Benz[a]anthracene	NA	517	1	5	ng/wet g	500	0	103	50 - 150%	PASS	0	25	PASS
Benzo[a]pyrene	NA	494	1	5	ng/wet g	500	0	99	50 - 150%	PASS	1	25	PASS
Benzo[b]fluoranthene	NA	519	1	5	ng/wet g	500	0	104	50 - 150%	PASS	2	25	PASS
Benzo[e]pyrene	NA	511	1	5	ng/wet g	500	0	102	50 - 150%	PASS	2	25	PASS
Benzo[g,h,i]perylene	NA	506	1	5	ng/wet g	500	0	101	50 - 150%	PASS	0	25	PASS
Benzo[k]fluoranthene	NA	504	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25	PASS
Biphenyl	NA	420	1	5	ng/wet g	500	0	84	50 - 150%	PASS	0	25	PASS
Chrysene	NA	479	1	5	ng/wet g	500	0	96	50 - 150%	PASS	0	25	PASS
Dibenz[a,h]anthracene	NA	559	1	5	ng/wet g	500	0	112	50 - 150%	PASS	2	25	PASS
Dibenzothiophene	NA	473	1	5	ng/wet g	500	0	95	50 - 150%	PASS	1	25	PASS
Fluoranthene	NA	505	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25	PASS
Fluorene	NA	479	1	5	ng/wet g	500	0	96	50 - 150%	PASS	1	25	PASS
Indeno[1,2,3-cd]pyrene	NA	559	1	5	ng/wet g	500	0	112	50 - 150%	PASS	3	25	PASS
Naphthalene	NA	376	1	5	ng/wet g	500	0	75	50 - 150%	PASS	0	25	PASS
Perylene	NA	482	1	5	ng/wet g	500	0	96	50 - 150%	PASS	1	25	PASS
Phenanthrene	NA	508	1	5	ng/wet g	500	0	102	50 - 150%	PASS	2	25	PASS

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	503	1	5	ng/wet g	500	0	101	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62367-MS1	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19			Analyzed: 11-May-19	
(d10-Acenaphthene)	NA	102			% Recovery	100	0	102	34 - 143% PASS			
(d10-Phenanthrene)	NA	105			% Recovery	100	0	105	48 - 134% PASS			
(d12-Chrysene)	NA	164			% Recovery	100	0	164	31 - 134% FAIL			M
(d12-Perylene)	NA	106			% Recovery	100	0	106	50 - 150% PASS			
(d8-Naphthalene)	NA	75			% Recovery	100	0	75	13 - 135% PASS			
1,6,7-Trimethylnaphthalene	NA	95.9	1	5	ng/wet g	96.3	2	98	50 - 150% PASS			
1-Methylnaphthalene	NA	81.6	1	5	ng/wet g	96.3	2.83	82	50 - 150% PASS			
1-Methylphenanthrene	NA	94.5	1	5	ng/wet g	96.3	1.77	96	50 - 150% PASS			
2,6-Dimethylnaphthalene	NA	90.3	1	5	ng/wet g	96.3	2.48	91	50 - 150% PASS			
2-Methylnaphthalene	NA	85.2	1	5	ng/wet g	96.3	5.66	83	50 - 150% PASS			
Acenaphthene	NA	92.2	1	5	ng/wet g	96.3	0	96	50 - 150% PASS			
Acenaphthylene	NA	91.9	1	5	ng/wet g	96.3	0	95	50 - 150% PASS			
Anthracene	NA	94.7	1	5	ng/wet g	96.3	0	98	50 - 150% PASS			
Benz[a]anthracene	NA	143	1	5	ng/wet g	96.3	0	148	50 - 150% PASS			
Benzo[a]pyrene	NA	103	1	5	ng/wet g	96.3	0	107	50 - 150% PASS			
Benzo[b]fluoranthene	NA	72.2	1	5	ng/wet g	96.3	0	75	50 - 150% PASS			
Benzo[e]pyrene	NA	84.4	1	5	ng/wet g	96.3	0	88	50 - 150% PASS			
Benzo[g,h,i]perylene	NA	91	1	5	ng/wet g	96.3	0	94	50 - 150% PASS			
Benzo[k]fluoranthene	NA	142	1	5	ng/wet g	96.3	0	147	50 - 150% PASS			
Biphenyl	NA	87.3	1	5	ng/wet g	96.3	0	91	50 - 150% PASS			
Chrysene	NA	155	1	5	ng/wet g	96.3	0	161	50 - 150% FAIL			1,M
Dibenz[a,h]anthracene	NA	102	1	5	ng/wet g	96.3	0	106	50 - 150% PASS			
Dibenzothiophene	NA	96.7	1	5	ng/wet g	96.3	0	100	50 - 150% PASS			
Fluoranthene	NA	93.1	1	5	ng/wet g	96.3	2.74	94	50 - 150% PASS			
Fluorene	NA	96.3	1	5	ng/wet g	96.3	2.12	98	50 - 150% PASS			
Indeno[1,2,3-cd]pyrene	NA	110	1	5	ng/wet g	96.3	0	114	50 - 150% PASS			
Naphthalene	NA	77.3	1	5	ng/wet g	96.3	7.75	72	50 - 150% PASS			
Perylene	NA	95.9	1	5	ng/wet g	96.3	0	100	50 - 150% PASS			
Phenanthrene	NA	97.3	1	5	ng/wet g	96.3	8.53	92	50 - 150% PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	91.7	1	5	ng/wet g	96.3	2.45	93	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62367-MS2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 11-May-19		
(d10-Acenaphthene)	NA	96			% Recovery	100	0	96	34 - 143%	PASS	6	30	PASS	
(d10-Phenanthrene)	NA	105			% Recovery	100	0	105	48 - 134%	PASS	0	30	PASS	
(d12-Chrysene)	NA	145			% Recovery	100	0	145	31 - 134%	FAIL	12	30	PASS	M
(d12-Perylene)	NA	107			% Recovery	100	0	107	50 - 150%	PASS	1	30	PASS	
(d8-Naphthalene)	NA	72			% Recovery	100	0	72	13 - 135%	PASS	4	30	PASS	
1,6,7-Trimethylnaphthalene	NA	84.4	1	5	ng/wet g	87.9	2	94	50 - 150%	PASS	4	25	PASS	
1-Methylnaphthalene	NA	70.8	1	5	ng/wet g	87.9	2.83	77	50 - 150%	PASS	6	25	PASS	
1-Methylphenanthrene	NA	86.2	1	5	ng/wet g	87.9	1.77	96	50 - 150%	PASS	0	25	PASS	
2,6-Dimethylnaphthalene	NA	78.6	1	5	ng/wet g	87.9	2.48	87	50 - 150%	PASS	4	25	PASS	
2-Methylnaphthalene	NA	72.1	1	5	ng/wet g	87.9	5.66	76	50 - 150%	PASS	9	25	PASS	
Acenaphthene	NA	79.6	1	5	ng/wet g	87.9	0	91	50 - 150%	PASS	5	25	PASS	
Acenaphthylene	NA	80.1	1	5	ng/wet g	87.9	0	91	50 - 150%	PASS	4	25	PASS	
Anthracene	NA	86.6	1	5	ng/wet g	87.9	0	99	50 - 150%	PASS	1	25	PASS	
Benz[a]anthracene	NA	125	1	5	ng/wet g	87.9	0	142	50 - 150%	PASS	4	25	PASS	
Benzo[a]pyrene	NA	92.2	1	5	ng/wet g	87.9	0	105	50 - 150%	PASS	2	25	PASS	
Benzo[b]fluoranthene	NA	85.4	1	5	ng/wet g	87.9	0	97	50 - 150%	PASS	26	25	FAIL	Q
Benzo[e]pyrene	NA	86.2	1	5	ng/wet g	87.9	0	98	50 - 150%	PASS	11	25	PASS	
Benzo[g,h,i]perylene	NA	91.4	1	5	ng/wet g	87.9	0	104	50 - 150%	PASS	10	25	PASS	
Benzo[k]fluoranthene	NA	121	1	5	ng/wet g	87.9	0	138	50 - 150%	PASS	6	25	PASS	
Biphenyl	NA	74.9	1	5	ng/wet g	87.9	0	85	50 - 150%	PASS	7	25	PASS	
Chrysene	NA	120	1	5	ng/wet g	87.9	0	137	50 - 150%	PASS	16	25	PASS	
Dibenz[a,h]anthracene	NA	92.3	1	5	ng/wet g	87.9	0	105	50 - 150%	PASS	1	25	PASS	
Dibenzothiophene	NA	87	1	5	ng/wet g	87.9	0	99	50 - 150%	PASS	1	25	PASS	
Fluoranthene	NA	83.6	1	5	ng/wet g	87.9	2.74	92	50 - 150%	PASS	2	25	PASS	
Fluorene	NA	84.8	1	5	ng/wet g	87.9	2.12	94	50 - 150%	PASS	4	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	90.6	1	5	ng/wet g	87.9	0	103	50 - 150%	PASS	10	25	PASS	
Naphthalene	NA	64.8	1	5	ng/wet g	87.9	7.75	65	50 - 150%	PASS	10	25	PASS	
Perylene	NA	88.7	1	5	ng/wet g	87.9	0	101	50 - 150%	PASS	1	25	PASS	
Phenanthrene	NA	88.5	1	5	ng/wet g	87.9	8.53	91	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	83.7	1	5	ng/wet g	87.9	2.45	92	50 - 150%	PASS	1	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Sample ID: 62367-R2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21064			Prepared: 25-Apr-19				Analyzed: 12-May-19		
(d10-Acenaphthene)	NA	103			% Recovery	100	103	34 - 143%	PASS	9	30	PASS	
(d10-Phenanthrene)	NA	106			% Recovery	100	106	48 - 134%	PASS	5	30	PASS	
(d12-Chrysene)	NA	139			% Recovery	100	139	31 - 134%	FAIL	6	30	PASS	M
(d12-Perylene)	NA	112			% Recovery	100	112	50 - 150%	PASS	1	30	PASS	
(d8-Naphthalene)	NA	71			% Recovery	100	71	13 - 135%	PASS	19	30	PASS	
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylphenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
2-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benz[a]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[a]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[e]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Biphenyl	NA	ND	1	5	ng/wet g					0	25	PASS	
Chrysene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenzothiophene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluorene	NA	ND	1	5	ng/wet g					0	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Naphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Phenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-MS1	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21066			Prepared: 07-May-19			Analyzed: 22-May-19	
(d10-Acenaphthene)	NA	99			% Recovery	100	0	99	34 - 143%	PASS		
(d10-Phenanthrene)	NA	99			% Recovery	100	0	99	48 - 134%	PASS		
(d12-Chrysene)	NA	106			% Recovery	100	0	106	31 - 134%	PASS		
(d12-Perylene)	NA	102			% Recovery	100	0	102	50 - 150%	PASS		
(d8-Naphthalene)	NA	82			% Recovery	100	0	82	13 - 135%	PASS		
1,6,7-Trimethylnaphthalene	NA	89.1	1	5	ng/wet g	88.1	1.99	99	50 - 150%	PASS		
1-Methylnaphthalene	NA	72.5	1	5	ng/wet g	88.1	2.02	80	50 - 150%	PASS		
1-Methylphenanthrene	NA	79.4	1	5	ng/wet g	88.1	2.41	87	50 - 150%	PASS		
2,6-Dimethylnaphthalene	NA	81.6	1	5	ng/wet g	88.1	1.64	91	50 - 150%	PASS		
2-Methylnaphthalene	NA	73.5	1	5	ng/wet g	88.1	3.37	80	50 - 150%	PASS		
Acenaphthene	NA	81.9	1	5	ng/wet g	88.1	0	93	50 - 150%	PASS		
Acenaphthylene	NA	90.2	1	5	ng/wet g	88.1	0	102	50 - 150%	PASS		
Anthracene	NA	82.4	1	5	ng/wet g	88.1	0	94	50 - 150%	PASS		
Benz[a]anthracene	NA	108	1	5	ng/wet g	88.1	0	123	50 - 150%	PASS		
Benzo[a]pyrene	NA	87.9	1	5	ng/wet g	88.1	0	100	50 - 150%	PASS		
Benzo[b]fluoranthene	NA	86.7	1	5	ng/wet g	88.1	0	98	50 - 150%	PASS		
Benzo[e]pyrene	NA	89.9	1	5	ng/wet g	88.1	0	102	50 - 150%	PASS		
Benzo[g,h,i]perylene	NA	88.3	1	5	ng/wet g	88.1	0	100	50 - 150%	PASS		
Benzo[k]fluoranthene	NA	98.8	1	5	ng/wet g	88.1	0	112	50 - 150%	PASS		
Biphenyl	NA	76.1	1	5	ng/wet g	88.1	0	86	50 - 150%	PASS		
Chrysene	NA	94.8	1	5	ng/wet g	88.1	1.05	106	50 - 150%	PASS		
Dibenz[a,h]anthracene	NA	97.5	1	5	ng/wet g	88.1	0	111	50 - 150%	PASS		
Dibenzothiophene	NA	84.3	1	5	ng/wet g	88.1	0	96	50 - 150%	PASS		
Fluoranthene	NA	80.9	1	5	ng/wet g	88.1	4.95	86	50 - 150%	PASS		
Fluorene	NA	88.9	1	5	ng/wet g	88.1	2.42	98	50 - 150%	PASS		
Indeno[1,2,3-cd]pyrene	NA	99.7	1	5	ng/wet g	88.1	0	113	50 - 150%	PASS		
Naphthalene	NA	61.8	1	5	ng/wet g	88.1	3.05	67	50 - 150%	PASS		
Perylene	NA	92.7	1	5	ng/wet g	88.1	0	105	50 - 150%	PASS		
Phenanthrene	NA	90.1	1	5	ng/wet g	88.1	11.6	89	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	77	1	5	ng/wet g	88.1	3.94	83	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-MS2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21066			Prepared: 07-May-19				Analyzed: 22-May-19	
(d10-Acenaphthene)	NA	95			% Recovery	100	0	95	34 - 143%	PASS	4	30 PASS	
(d10-Phenanthrene)	NA	99			% Recovery	100	0	99	48 - 134%	PASS	0	30 PASS	
(d12-Chrysene)	NA	104			% Recovery	100	0	104	31 - 134%	PASS	2	30 PASS	
(d12-Perylene)	NA	99			% Recovery	100	0	99	50 - 150%	PASS	3	30 PASS	
(d8-Naphthalene)	NA	85			% Recovery	100	0	85	13 - 135%	PASS	4	30 PASS	
1,6,7-Trimethylnaphthalene	NA	87.1	1	5	ng/wet g	88.5	1.99	96	50 - 150%	PASS	3	25 PASS	
1-Methylnaphthalene	NA	71.4	1	5	ng/wet g	88.5	2.02	78	50 - 150%	PASS	3	25 PASS	
1-Methylphenanthrene	NA	85.5	1	5	ng/wet g	88.5	2.41	94	50 - 150%	PASS	8	25 PASS	
2,6-Dimethylnaphthalene	NA	80.1	1	5	ng/wet g	88.5	1.64	89	50 - 150%	PASS	2	25 PASS	
2-Methylnaphthalene	NA	73.1	1	5	ng/wet g	88.5	3.37	79	50 - 150%	PASS	1	25 PASS	
Acenaphthene	NA	81.5	1	5	ng/wet g	88.5	0	92	50 - 150%	PASS	1	25 PASS	
Acenaphthylene	NA	86.6	1	5	ng/wet g	88.5	0	98	50 - 150%	PASS	4	25 PASS	
Anthracene	NA	83.5	1	5	ng/wet g	88.5	0	94	50 - 150%	PASS	0	25 PASS	
Benz[a]anthracene	NA	108	1	5	ng/wet g	88.5	0	122	50 - 150%	PASS	1	25 PASS	
Benzo[a]pyrene	NA	87.3	1	5	ng/wet g	88.5	0	99	50 - 150%	PASS	1	25 PASS	
Benzo[b]fluoranthene	NA	86.7	1	5	ng/wet g	88.5	0	98	50 - 150%	PASS	0	25 PASS	
Benzo[e]pyrene	NA	90.3	1	5	ng/wet g	88.5	0	102	50 - 150%	PASS	0	25 PASS	
Benzo[g,h,i]perylene	NA	88.3	1	5	ng/wet g	88.5	0	100	50 - 150%	PASS	0	25 PASS	
Benzo[k]fluoranthene	NA	94	1	5	ng/wet g	88.5	0	106	50 - 150%	PASS	6	25 PASS	
Biphenyl	NA	73.6	1	5	ng/wet g	88.5	0	83	50 - 150%	PASS	4	25 PASS	
Chrysene	NA	94.6	1	5	ng/wet g	88.5	1.05	106	50 - 150%	PASS	0	25 PASS	
Dibenz[a,h]anthracene	NA	98.7	1	5	ng/wet g	88.5	0	112	50 - 150%	PASS	1	25 PASS	
Dibenzothiophene	NA	85.5	1	5	ng/wet g	88.5	0	97	50 - 150%	PASS	1	25 PASS	
Fluoranthene	NA	85.9	1	5	ng/wet g	88.5	4.95	91	50 - 150%	PASS	6	25 PASS	
Fluorene	NA	87.7	1	5	ng/wet g	88.5	2.42	96	50 - 150%	PASS	2	25 PASS	
Indeno[1,2,3-cd]pyrene	NA	100	1	5	ng/wet g	88.5	0	113	50 - 150%	PASS	0	25 PASS	
Naphthalene	NA	66.3	1	5	ng/wet g	88.5	3.05	71	50 - 150%	PASS	6	25 PASS	
Perylene	NA	92.3	1	5	ng/wet g	88.5	0	104	50 - 150%	PASS	1	25 PASS	
Phenanthrene	NA	91.5	1	5	ng/wet g	88.5	11.6	90	50 - 150%	PASS	1	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	82.4	1	5	ng/wet g	88.5	3.94	89	50 - 150%	PASS	7	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62371-R2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**			**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21066			Prepared: 07-May-19				Analyzed: 22-May-19	
(d10-Acenaphthene)	NA	91			% Recovery	100	91	34 - 143%	PASS	6	30	PASS	
(d10-Phenanthrene)	NA	94			% Recovery	100	94	48 - 134%	PASS	3	30	PASS	
(d12-Chrysene)	NA	91			% Recovery	100	91	31 - 134%	PASS	6	30	PASS	
(d12-Perylene)	NA	95			% Recovery	100	95	50 - 150%	PASS	1	30	PASS	
(d8-Naphthalene)	NA	83			% Recovery	100	83	13 - 135%	PASS	6	30	PASS	
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylphenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
2-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benz[a]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[a]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[e]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Biphenyl	NA	ND	1	5	ng/wet g					0	25	PASS	
Chrysene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenzothiophene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluorene	NA	ND	1	5	ng/wet g					0	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Naphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Phenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-MS1	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**	
	Method: EPA 8270D				Batch ID: O-21068			Prepared: 08-May-19			Analyzed: 06-Jun-19	
(d10-Acenaphthene)	NA	94			% Recovery	100	0	94	34 - 143%	PASS		
(d10-Phenanthrene)	NA	93			% Recovery	100	0	93	48 - 134%	PASS		
(d12-Chrysene)	NA	100			% Recovery	100	0	100	31 - 134%	PASS		
(d12-Perylene)	NA	92			% Recovery	100	0	92	50 - 150%	PASS		
(d8-Naphthalene)	NA	83			% Recovery	100	0	83	13 - 135%	PASS		
1,6,7-Trimethylnaphthalene	NA	104	1	5	ng/wet g	96.1	1.46	107	50 - 150%	PASS		
1-Methylnaphthalene	NA	86.3	1	5	ng/wet g	96.1	0	90	50 - 150%	PASS		
1-Methylphenanthrene	NA	82	1	5	ng/wet g	96.1	0	85	50 - 150%	PASS		
2,6-Dimethylnaphthalene	NA	95.3	1	5	ng/wet g	96.1	0	99	50 - 150%	PASS		
2-Methylnaphthalene	NA	86.2	1	5	ng/wet g	96.1	1.27	88	50 - 150%	PASS		
Acenaphthene	NA	96.8	1	5	ng/wet g	96.1	0	101	50 - 150%	PASS		
Acenaphthylene	NA	102	1	5	ng/wet g	96.1	0	106	50 - 150%	PASS		
Anthracene	NA	95.3	1	5	ng/wet g	96.1	0	99	50 - 150%	PASS		
Benz[a]anthracene	NA	123	1	5	ng/wet g	96.1	1.35	127	50 - 150%	PASS		
Benzo[a]pyrene	NA	96.5	1	5	ng/wet g	96.1	0	100	50 - 150%	PASS		
Benzo[b]fluoranthene	NA	86.8	1	5	ng/wet g	96.1	0	90	50 - 150%	PASS		
Benzo[e]pyrene	NA	91.8	1	5	ng/wet g	96.1	0	96	50 - 150%	PASS		
Benzo[g,h,i]perylene	NA	101	1	5	ng/wet g	96.1	0	105	50 - 150%	PASS		
Benzo[k]fluoranthene	NA	115	1	5	ng/wet g	96.1	0	120	50 - 150%	PASS		
Biphenyl	NA	90.1	1	5	ng/wet g	96.1	0	94	50 - 150%	PASS		
Chrysene	NA	118	1	5	ng/wet g	96.1	0	123	50 - 150%	PASS		
Dibenz[a,h]anthracene	NA	115	1	5	ng/wet g	96.1	0	120	50 - 150%	PASS		
Dibenzothiophene	NA	93.4	1	5	ng/wet g	96.1	0	97	50 - 150%	PASS		
Fluoranthene	NA	83.9	1	5	ng/wet g	96.1	1.72	86	50 - 150%	PASS		
Fluorene	NA	103	1	5	ng/wet g	96.1	0	107	50 - 150%	PASS		
Indeno[1,2,3-cd]pyrene	NA	109	1	5	ng/wet g	96.1	0	113	50 - 150%	PASS		
Naphthalene	NA	78.9	1	5	ng/wet g	96.1	1.93	80	50 - 150%	PASS		
Perylene	NA	91.6	1	5	ng/wet g	96.1	0	95	50 - 150%	PASS		
Phenanthrene	NA	102	1	5	ng/wet g	96.1	4.82	101	50 - 150%	PASS		

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	76.6	1	5	ng/wet g	96.1	1.43	78	50 - 150%	PASS			

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-MS2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068			Prepared: 08-May-19			Analyzed: 06-Jun-19		
(d10-Acenaphthene)	NA	90			% Recovery	100	0	90	34 - 143%	PASS	4	30 PASS	
(d10-Phenanthrene)	NA	88			% Recovery	100	0	88	48 - 134%	PASS	6	30 PASS	
(d12-Chrysene)	NA	83			% Recovery	100	0	83	31 - 134%	PASS	19	30 PASS	
(d12-Perylene)	NA	90			% Recovery	100	0	90	50 - 150%	PASS	2	30 PASS	
(d8-Naphthalene)	NA	79			% Recovery	100	0	79	13 - 135%	PASS	5	30 PASS	
1,6,7-Trimethylnaphthalene	NA	94.2	1	5	ng/wet g	90	1.46	103	50 - 150%	PASS	4	25 PASS	
1-Methylnaphthalene	NA	77.4	1	5	ng/wet g	90	0	86	50 - 150%	PASS	5	25 PASS	
1-Methylphenanthrene	NA	74	1	5	ng/wet g	90	0	82	50 - 150%	PASS	4	25 PASS	
2,6-Dimethylnaphthalene	NA	86.9	1	5	ng/wet g	90	0	97	50 - 150%	PASS	2	25 PASS	
2-Methylnaphthalene	NA	78	1	5	ng/wet g	90	1.27	85	50 - 150%	PASS	3	25 PASS	
Acenaphthene	NA	87.5	1	5	ng/wet g	90	0	97	50 - 150%	PASS	4	25 PASS	
Acenaphthylene	NA	92	1	5	ng/wet g	90	0	102	50 - 150%	PASS	4	25 PASS	
Anthracene	NA	85.5	1	5	ng/wet g	90	0	95	50 - 150%	PASS	4	25 PASS	
Benz[a]anthracene	NA	98.8	1	5	ng/wet g	90	1.35	108	50 - 150%	PASS	16	25 PASS	
Benzo[a]pyrene	NA	88.2	1	5	ng/wet g	90	0	98	50 - 150%	PASS	2	25 PASS	
Benzo[b]fluoranthene	NA	82.1	1	5	ng/wet g	90	0	91	50 - 150%	PASS	1	25 PASS	
Benzo[e]pyrene	NA	86.3	1	5	ng/wet g	90	0	96	50 - 150%	PASS	0	25 PASS	
Benzo[g,h,i]perylene	NA	94.2	1	5	ng/wet g	90	0	105	50 - 150%	PASS	0	25 PASS	
Benzo[k]fluoranthene	NA	102	1	5	ng/wet g	90	0	113	50 - 150%	PASS	6	25 PASS	
Biphenyl	NA	81.5	1	5	ng/wet g	90	0	91	50 - 150%	PASS	3	25 PASS	
Chrysene	NA	95.2	1	5	ng/wet g	90	0	106	50 - 150%	PASS	15	25 PASS	
Dibenz[a,h]anthracene	NA	106	1	5	ng/wet g	90	0	118	50 - 150%	PASS	2	25 PASS	
Dibenzothiophene	NA	84.7	1	5	ng/wet g	90	0	94	50 - 150%	PASS	3	25 PASS	
Fluoranthene	NA	80	1	5	ng/wet g	90	1.72	87	50 - 150%	PASS	1	25 PASS	
Fluorene	NA	93.3	1	5	ng/wet g	90	0	104	50 - 150%	PASS	3	25 PASS	
Indeno[1,2,3-cd]pyrene	NA	100	1	5	ng/wet g	90	0	111	50 - 150%	PASS	2	25 PASS	
Naphthalene	NA	71.3	1	5	ng/wet g	90	1.93	77	50 - 150%	PASS	4	25 PASS	
Perylene	NA	86.3	1	5	ng/wet g	90	0	96	50 - 150%	PASS	1	25 PASS	
Phenanthrene	NA	94.2	1	5	ng/wet g	90	4.82	99	50 - 150%	PASS	2	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODE
Pyrene	NA	73.6	1	5	ng/wet g	90	1.43	80	50 - 150%	PASS	3	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62390-R2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**			**Sampled: 06-Mar-19**			**Received: 13-Mar-19**		
	Method: EPA 8270D				Batch ID: O-21068			Prepared: 08-May-19			Analyzed: 06-Jun-19		
(d10-Acenaphthene)	NA	86			% Recovery	100	86	34 - 143%	PASS	0	30	PASS	
(d10-Phenanthrene)	NA	88			% Recovery	100	88	48 - 134%	PASS	2	30	PASS	
(d12-Chrysene)	NA	83			% Recovery	100	83	31 - 134%	PASS	4	30	PASS	
(d12-Perylene)	NA	89			% Recovery	100	89	50 - 150%	PASS	1	30	PASS	
(d8-Naphthalene)	NA	75			% Recovery	100	75	13 - 135%	PASS	1	30	PASS	
1,6,7-Trimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
1-Methylphenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	
2,6-Dimethylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
2-Methylnaphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Acenaphthylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benz[a]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[a]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[b]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[e]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[g,h,i]perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Benzo[k]fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Biphenyl	NA	ND	1	5	ng/wet g					0	25	PASS	
Chrysene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenz[a,h]anthracene	NA	ND	1	5	ng/wet g					0	25	PASS	
Dibenzothiophene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluoranthene	NA	ND	1	5	ng/wet g					0	25	PASS	
Fluorene	NA	ND	1	5	ng/wet g					0	25	PASS	
Indeno[1,2,3-cd]pyrene	NA	ND	1	5	ng/wet g					0	25	PASS	
Naphthalene	NA	ND	1	5	ng/wet g					0	25	PASS	
Perylene	NA	ND	1	5	ng/wet g					0	25	PASS	
Phenanthrene	NA	ND	1	5	ng/wet g					0	25	PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Pyrene	NA	ND	1	5	ng/wet g					0	25 PASS	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature
1904 E. Wright Circle, Anaheim CA 92806 main: (714) 602-5320 fax: (714) 602-5321 www.physislabs.com info@physislabs.com CA ELAP #2769

Total Extractable Organics — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODE
Sample ID: 62345-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: Gravimetric				Batch ID: C-27099		Prepared: 30-Apr-19				Analyzed: 30-Apr-19	
Percent Lipids	NA	ND	0.01	0.05	% wet weight							
Sample ID: 62346-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: Gravimetric				Batch ID: C-27100		Prepared: 09-May-19				Analyzed: 09-May-19	
Percent Lipids	NA	ND	0.01	0.05	% wet weight							
Sample ID: 62347-B1	**QAQC Procedural Blank**				**Matrix: DI Water**		**Sampled:**				**Received:**	
	Method: Gravimetric				Batch ID: C-27101		Prepared: 14-May-19				Analyzed: 14-May-19	
Percent Lipids	NA	ND	0.01	0.05	% wet weight							
Sample ID: 62354-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**				**Received:**	
	Method: Gravimetric				Batch ID: C-27099		Prepared: 30-Apr-19				Analyzed: 30-Apr-19	
Percent Lipids	NA	10.4	0.01	0.05	% wet weight	10.4		100	62 - 137% PASS			
Sample ID: 62355-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**				**Received:**	
	Method: Gravimetric				Batch ID: C-27100		Prepared: 09-May-19				Analyzed: 09-May-19	
Percent Lipids	NA	10.8	0.01	0.05	% wet weight	10.4		104	62 - 137% PASS			
Sample ID: 62356-CRM1	**QAQC CRM - SRM 1947**				**Matrix: Tissue**		**Sampled:**				**Received:**	
	Method: Gravimetric				Batch ID: C-27101		Prepared: 14-May-19				Analyzed: 14-May-19	
Percent Lipids	NA	9.92	0.01	0.05	% wet weight	10.4		95	62 - 137% PASS			
Sample ID: 62367-R2	**C1_91202SDSBBOG18LPS Leopard Shark**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: Gravimetric				Batch ID: C-27099		Prepared: 30-Apr-19				Analyzed: 30-Apr-19	
Percent Lipids	NA	0.134	0.01	0.05	% wet weight					15	25 PASS	
Sample ID: 62371-R2	**C1_91203SDNBBOG18BSB Barred Sand**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: Gravimetric				Batch ID: C-27100		Prepared: 09-May-19				Analyzed: 09-May-19	
Percent Lipids	NA	0.462	0.01	0.05	% wet weight					18	25 PASS	
Sample ID: 62390-R2	**C1_90208OCNHBOG18BSB Barred San B**				**Matrix: Tissue**		**Sampled: 06-Mar-19**				**Received: 13-Mar-19**	
	Method: Gravimetric				Batch ID: C-27101		Prepared: 14-May-19				Analyzed: 14-May-19	
Percent Lipids	NA	0.509	0.01	0.05	% wet weight					8	25 PASS	

CHAIN OF CUSTODY

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 1 of 6

RHMP

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
C1_91202SDSBBOG18BKC	3/6/19		Fish tissue		2	Black Croaker	✓ Metals / PCBs, ✓ CHCs
C1_91202SDSBBOG18RSR	"		"		"	Round Stingray	✓ " ✓
C2_ "	"		"		"	"	✓ " ✓
C1_91202SDSBBOG18YFC	"		"		"	Yellowfin Croaker	✓ " ✓
C1_91202SDSBBOG18NAC	"		"		"	Northern Anchovy	✓ " ✓
C2_ "	"		"		"	"	✓ " ✓
C1_91202SDSBBOG18PCM	"		"		"	Pacific Chub Mackerel	✓ " ✓
C1_91202SDSBBOG18SAC	"		"		"	Slough Anchovy	✓ " ✓
C2_ "	"		"		"	"	✓ " ✓
C3_ "	"		"		"	"	✓ " ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BRANDEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK O. RAUER	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) AMTECS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 2 of 6

RHMP

Sample Collection By:			Project Name: Bight '18				Project Number:
Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
G_9120250SBBOG18LPS	3/6/19		Fish tissue		2	Leopard Shark	Metals / PCBs ✓, CHCs
G_91203SDNBBOG18LPS	"		"		"	"	✓ : ✓
G_91203SDNBBOG18BKC	"		"		"	Black Croaker	✓ : ✓
G_91203SDNBBOG18BLS	"		"		"	Black Surfperch	✓ : ✓
G_91203SDNBBOG18BSB	"		"		"	Barred Sand Bass	✓ : ✓
C2_ "	"		"		"	"	✓ : ✓
G_91203SDNBBOG18NAC	"		"		"	Northern Anchovy	✓ : ✓
C2_ "	"		"		"	"	✓ : ✓
G_91203SDNBBOG18RSR	"		"		"	Round Stingray	✓ : ✓
C2_ "	"		"		"	"	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. BAKER	(Time) 17:45	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PHYSIS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 3 of 6

RHMP

Sample Collection By:			Project Name: Bight '18				Project Number:
Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
Ci_91203SDNBBOGI8QEF	3/6/19		Fish tissue		2	Queenfish	Metals / PCBs, OCs
C2_ :	:		:		2		✓ : ✓
C3_ :	:		:		:		✓ : ✓
NA C1_91203SDNBBOGI8SAC	:		:		1	Slough Anchovy	☐ : ✓
C1_90606MISSBOGI8SSB	:		:		2	Spotted Sand Bass	✓ : ✓
C2_ :	:		:		:	:	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
C1_90606MISSBOGI8RSR	:		:		:	Round Stingray	✓ : ✓
C1_90606MISSBOGI8SEL	:		:		:	Salema	✓ : ✓
C1_90606MISSBOGI8SHS	:		:		:	Shiner Surfperch	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARLA D. ROSE	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) BHTSIS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3/6/19 Page 4 of 6

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
G_90606MISSBoGI8YFC	3/6/19		Fish tissue		2	Yellowfin Croaker	Metals / PCBs, CHCs
C2_ :	:		:		:	:	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
G_902080CNH BoGI8 BSB	:		:		:	Barred Sand Bass	✓ : ✓
C2_ :	:		:		:	:	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
G_902080CNHBoGI8SFC	:		:		:	Spotfin Croaker	✓ : ✓
C3_ :	:		:		:	:	✓ : ✓
G_902080CNHBoGI8SHS	:		:		:	Shiner Surfperch	✓ : ✓
G_902080CNHBoGI8CAH	:		:		:	California Halibut	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) NOEL A. FOLK	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PXPS13		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody
Date 3/6/19 Page 5 of 6

RHMP

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
G1_90208OCNHBOG18SSB	3/6/19		Fish tissue		2	Spotted Sand Bass	Metals / PCBs, ✓ CHCs
G2_ :	:		:		2	:	✓ : ✓
G3_ :	:		:		2	:	✓ : ✓
G1_90208OCNHBOG18WHS	:		:		:	White Surfperch	✓ : ✓
G_90110DANABOG18BLS	:		:		1	Black Surfperch	☐ : ✓
G1_90110DANABOG18BSB	:		:		2	Barred Sand Bass	✓ : ✓
G_90110DANABOG18SHS	:		:		:	Shiner Surfperch	✓ : ✓
G1_90110DANABOG18SSB	:		:		:	Spotted Sand Bass	✓ : ✓
G_90110DANABOG18WHS	:		:		:	White Surfperch	✓ : ✓

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 2:45p.	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARK D. GRAY	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PARIS		(Company)		(Company)	

Southern California Coastal Water Research Project
3535 Harbor Blvd. Suite 110
Costa Mesa, CA 92626-1437
(714) 755-3200 Fax (714) 755-3299

Chain of Custody

Date 3-6/19 Page 6 of 6

RHMP

Sample Collection By: _____ Project Name: Bight '18 Project Number: _____

Sample ID	Date	Time	Matrix	Container Type	Number of Containers	Comments	Analysis
Dup-C2_91203SDNBBoG18BSB						Report as	✓ Metals / PCBs / CHCs
	3-6-19		Fish tissue		2	C2_91203SDNBBoG18 BSB, rep 2	
Dup-C1_91203SDNBBoG18NAC						Report as	✓ Metals / PCBs. ✓ CHCs
	3-6-19		:		2	C1_91203SDNBBoG18NAC, rep 2	

Relinquished By		Relinquished By		Relinquished By	
(Signature)	(Date) 3-13-19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) BOWEN DU	(Time) 12:45P	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) SCCWRP		(Company)		(Company)	
Received By		**Received By**		**Received By**	
(Signature)	(Date) 3/13/19	(Signature)	(Date)	(Signature)	(Date)
(Printed Name) MARIA O. RAMOS	(Time) 1245	(Printed Name)	(Time)	(Printed Name)	(Time)
(Company) PHYSIS		(Company)		(Company)	

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Physis Project ID
1807003-021

Sample Receipt Summary

Client: Wood Environment & Infrastructure Solutions, Inc Date Received: 3/13/2019 Received By: MB Inspected By: RGH

Courier:	Cooler:	Temperature:
☑ Physis ☐ FEDEX ☐ UPS ☐ Client	☑ Cooler ☐ Box Total #: 1	☐ BLUE ☐ WET ☑ DRY
Start End ☐ Other:	☐ Other :	☐ None -2.4 °C

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes
2. All sample containers arrived intact..... Yes
3. All samples listed on COC(s) are present..... Yes
4. Information on containers consistent with information on COC(s)..... Yes
5. Correct containers and volume for all analyses indicated..... Yes
6. All samples received within method holding time..... Yes
7. Correct preservation used for all analyses indicated..... Yes
8. Name of sampler included on COC(s)..... No

Notes:

Sample ID(s) C1_91203SDNBBOG18SAC (Slough Anchovy) only 1 jar was received.
Sample ID(s) C1_90110DANABOG18BLS (Black Surf Perch) only 1 jar was received.

APPENDIX F

DATA VALIDATION REPORT (LDC)

Level II
Data Validation

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Wood Environment & Infrastructure
9210 Sky Park Ct
San Diego, CA 92123
Attn: Ms. Corey Sheredy
corey.sheredy@woodplc.com

July 25, 2019

SUBJECT: 2018 Regional Harbor Monitoring Program, Data Validation

Dear Ms. Sheredy

Enclosed are the final validation reports for the fractions listed below. These SDGs were received on July 1, 2019. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #45435:

SDG #	Fraction
1807003-020 1807003-021	Polynuclear Aromatic Hydrocarbons, Polybrominated Diphenyl Ethers, Chlorinated Pesticides, PCB as Congeners, Metals, Wet Chemistry

The data validation was performed under Level II guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California; June 2018
- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, January 2017
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review; January 2017
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

887 pages-ADV

Attachment 1

Level II/IV - Client Select

LDC #45435 (Wood Environment & Infrastructure Solutions-San Diego, CA / 2018 Regional Harbor Monitoring Program)

LDC	SDG#	DATE REC'D	(3) DATE DUE	PAHs (8270D)		PDBE (8270D)		Pest. (8270D)		PCB Cong. (8270D)		Metals (6020A /245.1)		% Solids (2540B)		% Lipids (Gravi.)																					
Matrix:	Tissue/Water/Sediment			T	S	T	S	T	S	T	S	T	S	T	S	T	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	18007003-020	07/01/19	07/23/19	25	0	25	0	25	0	25	0	25	0	25	0	25	0																		
B	18007003-021	07/01/19	07/23/19	51	0	51	0	51	0	51	0	51	0	51	0	51	0																		
Total	J/PG			76	0	76	0	76	0	76	0	76	0	76	0	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	532

Shaded cells indicate Level IV validation (all other cells are Level II review). These sample counts do not include DL, RE, MS, MSD, or DUP's.

L:\Wood Environmental\RHMP\45435ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 22, 2019

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-020

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
C1_90606MICABOG18CAC	61958	Tissue	02/11/19
C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
C1_90110DANABOG18PCM	61964	Tissue	02/11/19
C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Using professional judgment, no data were qualified when one surrogate %R was outside the QC limits and the %R was greater than or equal to 10%.

VIII. Matrix Spike/Matrix Spike Duplicates/ Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	Benzo(a)anthracene Chrysene	336 (50-150) 226 (50-150)	339 (50-150) 219 (50-150)	NA	-

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	1-Methylphenanthrene	41 (≤25)	NA	-

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
61934-BS1/BS2 (C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS)	1-Methylnaphthalene 2-Methylnaphthalene Biphenyl Naphthalene	60 (70-130) 62 (70-130) 69 (70-130) 49 (70-130)	- - - -	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
61935-BS1/BS2 (C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS)	1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	- - -	67 (70-130) 68 (70-130) 56 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P

Relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
61934-BS1/BS2 (C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS)	1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	29 (≤25) 31 (≤25) 44 (≤25)	NA	-
61935-BS1/BS2 (C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS)	Naphthalene	35 (≤25)	NA	-

X. Field Replicates

No field replicates were identified in this SDG.

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-020	Compound reported below the RL and above the MDL	J (all detects)	A

XIII. Target Compound Identifications

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to LCS/LCSD %R and results reported below the RL and above the MDL, data were qualified as estimated in twenty-five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 1807003-020

Sample	Compound	Flag	A or P	Reason (Code)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	1-Methylnaphthalene 2-Methylnaphthalene Biphenyl Naphthalene	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

LDC #: 45435A2b

SDG #: 1807003-020

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/20/19

Page: 1 of 2

Reviewer:

2nd Reviewer: SM6

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates /DUP	SW A	
IX.	Laboratory control samples	SW	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
2	C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
3	C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
4	C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
5	C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
6	C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
7	C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
8	C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
9	C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
10	C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
11	C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
12	C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
13	C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19

LDC #: 45435A2b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/26/19
SDG #: 1807003-020 Level II Page: 2 of 2
Laboratory: Physis Environmental Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D)

14	C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
15	C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
16	C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
17	C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
18	C1_90606MICABOG18CAC	61958	Tissue	02/11/19
19	C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
20	C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
21	C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
22	C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
23	C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
24	C1_90110DANABOG18PCM	61964	Tissue	02/11/19
25	C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
26	C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19
27	C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
28	C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19
29				
30				
31				

Notes:

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	CC. Dimethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	GGGG. C30-Hopane	I1. Methyl methanesulfonate
B. Bis (2-chloroethyl) ether	DD. Acenaphthylene	FFF. Di-n-octylphthalate	HHHH. 1-Methylphenanthrene	J1. Ethyl methanesulfonate
C. 2-Chlorophenol	EE. 2,6-Dinitrotoluene	GGG. Benzo(b)fluoranthene	IIII. 1,4-Dioxane	K1. o,o',o''-Triethylphosphorothioate
D. 1,3-Dichlorobenzene	FF. 3-Nitroaniline	HHH. Benzo(k)fluoranthene	JJJJ. Acetophenone	L1. n-Phenylene diamine
E. 1,4-Dichlorobenzene	GG. Acenaphthene	III. Benzo(a)pyrene	KKKK. Atrazine	M1. 1,4-Naphthoquinone
F. 1,2-Dichlorobenzene	HH. 2,4-Dinitrophenol	JJJ. Indeno(1,2,3-cd)pyrene	LLLL. Benzaldehyde	N1. N-Nitro-o-toluidine
G. 2-Methylphenol	II. 4-Nitrophenol	KKK. Dibenz(a,h)anthracene	MMMM. Caprolactam	O1. 1,3,5-Trinitrobenzene
H. 2,2'-Oxybis(1-chloropropane)	JJ. Dibenzofuran	LLL. Benzo(g,h,i)perylene	NNNN. 2,6-Dichlorophenol	P1. Pentachlorobenzene
I. 4-Methylphenol	KK. 2,4-Dinitrotoluene	MMM. Bis(2-Chloroisopropyl)ether	OOOO. 1,2-Diphenylhydrazine	Q1. 4-Aminobiphenyl
J. N-Nitroso-di-n-propylamine	LL. Diethylphthalate	NNN. Aniline	PPPP. 3-Methylphenol	R1. 2-Naphthylamine
K. Hexachloroethane	MM. 4-Chlorophenyl-phenyl ether	OOO. N-Nitrosodimethylamine	QQQQ. 3&4-Methylphenol	S1. Triphenylene
L. Nitrobenzene	NN. Fluorene	PPP. Benzoic Acid	RRRR. 4-Dimethyldibenzothiophene (4MDT)	T1. Octachlorostyrene
M. Isophorone	OO. 4-Nitroaniline	QQQ. Benzyl alcohol	SSSS. 2/3-Dimethyldibenzothiophene (4MDT)	U1. Famphur
N. 2-Nitrophenol	PP. 4,6-Dinitro-2-methylphenol	RRR. Pyridine	TTTT. 1-Methyldibenzothiophene (1MDT)	V1. 1,4-phenylenediamine
O. 2,4-Dimethylphenol	QQ. N-Nitrosodiphenylamine	SSS. Benzidine	UUUU.. 2,3,4,6-Tetrachlorophenol	W1. Methapyrilene
P. Bis(2-chloroethoxy)methane	RR. 4-Bromophenyl-phenylether	TTT. 1-Methylnaphthalene	VVVV. 1,2,4,5-Tetrachlorobenzene	X1. Pentachloroethane
Q. 2,4-Dichlorophenol	SS. Hexachlorobenzene	UUU.Benzo(b)thiophene	WWWW.. 2-Picoline	Y1. 3,3'-Dimethylbenzidine
R. 1,2,4-Trichlorobenzene	TT. Pentachlorophenol	VVV.Benzonaphthothiophene	XXXX. 3-Methylcholanthrene	Z1. o-Toluidine
S. Naphthalene	UU. Phenanthrene	WWW.Benzo(e)pyrene	YYYY. a,a-Dimethylphenethylamine	A2. 1-Naphthylamine
T. 4-Chloroaniline	VV. Anthracene	XXX. 2,6-Dimethylnaphthalene	ZZZZ. Hexachloropropene	B2. 4-Aminobiphenyl
U. Hexachlorobutadiene	WW. Carbazole	YYY. 2,3,5-Trimethylnaphthalene	A1. N-Nitrosodiethylamine	C2. 4-Nitroquinoline-1-oxide
V. 4-Chloro-3-methylphenol	XX. Di-n-butylphthalate	ZZZ. Perylene	B1. N-Nitrosodi-n-butylamine	D2. Hexachloropene
W. 2-Methylnaphthalene	YY. Fluoranthene	AAAA. Dibenzothiophene	C1. N-Nitrosomethylethylamine	E2. Bis (2-chloro-1-methylethyl) ether
X. Hexachlorocyclopentadiene	ZZ. Pyrene	BBBB. Benzo(a)fluoranthene	D1. N-Nitrosomorpholine	F2. Bifenthrin
Y. 2,4,6-Trichlorophenol	AAA. Butylbenzylphthalate	CCCC. Benzo(b)fluorene	E1. N-Nitrosopyrrolidine	G2. Cyfluthrin
Z. 2,4,5-Trichlorophenol	BBB. 3,3'-Dichlorobenzidine	DDDD. cis/trans-Decalin	F1. Phenacetin	H2. Cypermethrin
AA. 2-Chloronaphthalene	CCC. Benzo(a)anthracene	EEEE. Biphenyl	G1. 2-Acetylaminofluorene	I2. Permethrin (cis/trans)
BB. 2-Nitroaniline	DDD. Chrysene	FFFF. Retene	H1. Pronamide	J2. 5-Nitro-o-toluidine

LDC #: ~~15135A-b~~

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		1	d12-DDD	101 (31-134)	No qual
		2		148 ( )	
		4		179 ( )	
		5		179 ( )	
		6		210 ( )	
		7		226 ( )	
		8		207 ( )	
		9		233 ( )	
		10		200 ( )	
		11		206 ( )	
		12		233 ( )	
		13		190 ( )	
		14		200 ( )	
		15	↓	202 ( )	↓

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 15435A2b

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		16	dP-DDD	205 (31-134)	No qual
		17		223 ( )	
		18		266 ( )	
		19		199 ( )	
		20		181 ( )	
		21		33 ( )	
		22		202 ( )	
		23		151 ( )	
		24		244 ( )	
		25	↓	198 (✓)	↓

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 45435A-2b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: [signature]
2nd Reviewer: [initials]

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.
(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	26/27	CCC	336 (50-150)	339 (50-150)	( )	6 (ND)	Jdets/A (HH)
		DDD	226 (↓)	219 (↓)	( )		↓
		HHHH	( )	( )	41 (≤25)		Jdets/A (HD)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 45435A2b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JM

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		61934-BS1	TTT	60 (70-130)	( )	( )	1-19, MB	J/UJ/P(LL)
		-BS2	W	62 ( )	( )	( )	(NO)	
			ZZZZ	69 ( )	( )	( )		
			S	49 ( )	( )	( )		
			TTT	( )	( )	29 (≤25)		J/UJ/P(HD)
			W	( )	( )	31 ( )		
			S	( )	( )	44 ( )		
				( )	( )	( )		
		61935-BS1	TTT	( )	67 (70-130)	( )	20-25, MB	J/UJ/P(LL)
		-BS2	W	( )	68 ( )	( )	(NO)	
			S	( )	56 ( )	( )		
			S	( )	( )	35 (≤25)		J/UJ/P(HD)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 23, 2019

Parameters: Polybrominated Diphenyl Ethers

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-020

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
C1_90606MICABOG18CAC	61958	Tissue	02/11/19
C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
C1_90110DANABOG18PCM	61964	Tissue	02/11/19
C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polybrominated Diphenyl Ethers (PBDE) by Environmental Protection Agency (EPA) SW 846 Method 8270D-NCI

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
C1_912035DNBBOG18KPB	DFPBDE FTBDE	50 (53-141) 135 (61-132)	All compounds	J (all detects) UJ (all non-detects)	A
C1_90606MICABOG18CAC	DFPBDE	47 (53-141)	All compounds	UJ (all non-detects)	P

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicates Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	PBDE 085 PBDE 099 PBDE 138 PBDE 153 PBDE 154 PBDE 183 PBDE 100	46 (50-150) 44 (50-150) 42 (50-150) 39 (50-150) 44 (50-150) 41 (50-150) -	42 (50-150) 41 (50-150) 32 (50-150) 32 (50-150) 40 (50-150) 38 (50-150) 44 (50-150)	J (all detects) UJ (all non-detects)	A

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	PBDE 138	27 (≤25)	NA	-

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

Relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
61934-BS1/BS2 (C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS)	PBDE 138 PBDE 183 PBDE 209	31 (≤25) 35 (≤25) 58 (≤25)	NA	-

LCS ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
61935-BS1/BS2 (C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS)	PBDE	43 (≤25)	NA	-

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
61939-CRM1	PBDE 153	35 (50-150)	C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	UJ (all non-detects)	A

X. Field Replicates

No field replicates were identified in this SDG.

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-020	Compound reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to surrogate %R, MS/MSD %R, CRM %R, and results reported below the RL and above the MDL, data were qualified as estimated in twenty-five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Data Qualification Summary - SDG 1807003-020

Sample	Compound	Flag	A or P	Reason (Code)
C1_912035DNBBOG18KPB	All compounds	J (all detects) UJ (all non-detects)	A	Surrogates (%R) (LS)
C1_90606MICABOG18CAC	All compounds	UJ (all non-detects)	P	Surrogates (%R) (LS)
C1_912035DNBBOG18KPB	PBDE 085 PBDE 099 PBDE 138 PBDE 153 PBDE 154 PBDE 183 PBDE 100	J (all detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (LM)
C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	PBDE 153	UJ (all non-detects)	A	Certified reference material (%R) (LP)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Laboratory Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Field Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

LDC #: 45435A2c

SDG #: 1807003-020

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/26/19

Page: 1 of 2

Reviewer: 9

2nd Reviewer: AVG

METHOD: GC/MS Polybrominated Diphenyl Ethers (EPA SW 846 Method 8270D-NCI)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A/SW	
VIII.	Matrix spike/Matrix spike duplicates /DUP /CRM	SW/A	
IX.	Laboratory control samples	SW/SW	LCS/D. CRM
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
2	C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
3	C3_90110DANABOG18WCRD 44	61943	Tissue	02/05/19
4	C1_902080CNHBOG18YFC 47	61944	Tissue	02/05/19
5	C2_902080CNHBOG18YFC 44/47/49	61945	Tissue	02/05/19
6	C1_912035DNBBOG18KPB L	61946	Tissue	02/05/19
7	C2_912035DNBBOG18KPB 154	61947	Tissue	02/05/19
8	C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
9	C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
10	C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
11	C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
12	C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
13	C2_91203SDNBBOG18SSB —	61953	Tissue	02/05/19

LDC #: 45435A2c

SDG #: 1807003-020

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/30/19

Page: 2 of 2

Reviewer: CT

2nd Reviewer: JV

METHOD: GC/MS Polybrominated Diphenyl Ethers (EPA SW 846 Method 8270D-NCI)

14	C3_91203SDNBBOG18SSB		61954	Tissue	02/05/19
15	C1_91202SDSBBOG18SSB		61955	Tissue	02/05/19
16	C2_91202SDSBBOG18SSB		61956	Tissue	02/05/19
17	C3_91202SDSBBOG18SSB		61957	Tissue	02/05/19
18	C1_90606MICABOG18CAC		61958	Tissue	02/11/19
19	C1_90606MISSBOG18WHS		61959	Tissue	02/11/19
20	C2_90606MISSBOG18WHS		61960	Tissue	02/11/19
21	C1_90606MISSBOG18BLS		61961	Tissue	02/11/19
22	C1_90606MISSBOG18BSH		61962	Tissue	02/11/19
23	C1_902080CNHBOG18SFC		61963	Tissue	02/11/19
24	C1_90110DANABOG18PCM		61964	Tissue	02/11/19
25	C1_91203SDNBBOG18SHS		61965	Tissue	02/11/19
26	C1_912035DNBBOG18KPBMS		61946MS	Tissue	02/05/19
27	C1_912035DNBBOG18KPBMSD		61946MSD	Tissue	02/05/19
28	C1_912035DNBBOG18KPBDUP		61946DUP	Tissue	02/05/19
29					
30					
31					

Notes:

LDC #: ~~45435~~ A2c

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were percent recoveries (%R) for surrogates within QC limits?

Y (N) N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?

Y N (N/A) If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		6 (det + ND)	DFPBDE	50 (53-141)	J/UJ/A (<8)
			FTBDE	135 (61-132)	↓
				( )	
		18 (ND)	DFPBDE	47 (53-141)	J/UJ/P (<8)
			~~FTBDE~~	~~13~~ ( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5

(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 45435A2c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	26/27	PBDE085	46 (50-150)	42 (50-150)	( )	6 (det+ND)	J/UJ/A (<M)
		099	44 ( )	41 ( )	( )		
		138	42 ( )	32 ( )	( )		
		153	39 ( )	32 ( )	( )		
		154	44 ( )	40 ( )	( )		
		183	41 ( )	38 ( )	( )		
		100	( )	44 ( )	( )		
		138	( )	( )	27 (≤25)	(ND)	J dets/A (HD)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 45435A2C

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: 9
2nd Reviewer: SR

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		61934-BS1/-BS2	PBDE138	( )	( )	31 (≤25)	1-19. MB (ND)	J+ (all detects)/UJ (HD)
			183	( )	( )	35 ( )		
			209	( )	( )	58 ( )		
				( )	( )	( )		
				( )	( )	( )		
		61935-BS1/-BS2	PBDE209	( )	( )	43 (≤25)	20-25. MB (ND)	J+ (all detects)/UJ (HD)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		61939-CRM1	PBDE153	35 (50-150)	( )	( )	20-25 (ND)	J/UJ/A (all detects)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 22, 2019

Parameters: Chlorinated Pesticides

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-020

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
C1_90606MICABOG18CAC	61958	Tissue	02/11/19
C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
C1_90110DANABOG18PCM	61964	Tissue	02/11/19
C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Chlorinated Pesticides by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	Endosulfan I	3129 (50-150)	3404 (50-150)	NA	-

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	Dicofol Endrin aldehyde	55 (≤25) 29 (≤25)	NA	-

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBDUP (C1_912035DNBBOG18KPB)	4,4'-DDE	31 (≤25)	J (all detects)	A

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
61934-BS1/BS2 (C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS)	Endrin aldehyde Dicofol	29 (70-130) 58 (70-130)	37 (70-130) 50 (70-130)	UJ (all non-detects) UJ (all non-detects)	P
61935-BS1/BS2 (C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS)	Endosulfan II Endrin aldehyde Endosulfan I	54 (70-130) 29 (70-130) 66 (70-130)	58 (70-130) 30 (70-130) 65 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P

Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
61939-CRM1	2,4'-DDD 2,4'-DDE 2,4'-DDT alpha-BHC	937 (50-150) 1029 (50-150) 892 (50-150) 208 (50-150)	C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	NA	-
61940-CRM1	2,4'-DDD 2,4'-DDE 2,4'-DDT alpha-BHC	743 (50-150) 932 (50-150) 611 (50-150) 363 (50-150)	C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	NA	-

X. Field Replicates

No field replicates were identified in this SDG.

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-020	Compound reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIII. Target Compound Identification

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to DUP RPD, LCS/LCSD %R, and results reported below the RL and above the MDL, data were qualified as estimated in twenty-five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Data Qualification Summary - SDG 1807003-020

Sample	Compound	Flag	A or P	Reason (Code)
C1_912035DNBBOG18KPB	4,4'-DDE	J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	Endrin aldehyde Dicofol	UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Endosulfan II Endrin aldehyde Endosulfan I	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

LDC #: 45435A3a

SDG #: 1807003-020

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/21/19

Page: 1 of 1

Reviewer: [illegible]

2nd Reviewer: [illegible]

METHOD: GC/MS Chlorinated Pesticides (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates /DMP /ERM	SW/SW	
IX.	Laboratory control samples /ERM	SW	LCSD. ERM
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
2	C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
3	C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
4	C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
5	C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
6	C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
7	C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
8	C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
9	C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
10	C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
11	C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
12	C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
13	C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19

LDC #: 45435A3a **VALIDATION COMPLETENESS WORKSHEET** Date: 7/31/19
SDG #: 1807003-020 Level II Page: 3 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS Chlorinated Pesticides (EPA SW 846 Method 8270D)

14	C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
15	C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
16	C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
17	C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
18	C1_90606MICABOG18CAC	61958	Tissue	02/11/19
19	C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
20	C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
21	C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
22	C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
23	C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
24	C1_90110DANABOG18PCM	61964	Tissue	02/11/19
25	C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
26	C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19
27	C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
28	C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19
29				
30				
31				

Notes:

	0-21062						
	0-21064						

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticide/PCB (EPA SW 846 Method 8081B/8082A)

A. alpha-BHC	I. Dieldrin	Q. Endrin ketone	Y. Aroclor-1242	GG. Chlordane
B. beta-BHC	J. 4,4'-DDE	R. Endrin aldehyde	Z. Aroclor-1248	HH. Chlordane (Technical)
C. delta-BHC	K. Endrin	S. alpha-Chlordane	AA. Aroclor-1254	II. oxy-Chlordane
D. gamma-BHC (Lindane)	L. Endosulfan II	T. gamma-Chlordane	BB. Aroclor-1260	JJ. Mirex
E. Heptachlor	M. 4,4'-DDD	U. Toxaphene	CC. 2,4'-DDD	KK. Kepone
F. Aldrin	N. Endosulfan sulfate	V. Aroclor-1016	DD. 2,4'-DDE	LL.
G. Heptachlor epoxide	O. 4,4'-DDT	W. Aroclor-1221	EE. 2,4'-DDT	MM.
H. Endosulfan I	P. Methoxychlor	X. Aroclor-1232	FF. Hexachlorobenzene	NN.

Notes:_____

LDC #: ~~45435A~~7a

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: q
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	26/27	H	3129 (50-150)	3404 (50-150)	( )	6 (ND)	J dets/A
		Dicofol	( )	( )	55 (≤25)		
		R	( )	( )	29 (↓)		↓
			( )	( )	( )		
			( )	( )	( )		
	28	J	( )	( )	31 (≤25)	6 (dets)	J dets/A (HD)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 45735A3a

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: 9
2nd Reviewer: SV

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		61934-BS1	R	29 TO-130	37 TO-130	( )	1-19. MB (ND)	J/UJ/A(LL)
		BS2	dicofol	58 (↓)	50 (↓)	( )		↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		61935-BS1	L	54 TO-130	~~58~~ TO-130	( )	20-25. MB	J/UJ/A(LL)
			R	29 (↓)	30 (↓)	( )	(ND)	↓
			H	66 (↓)	65 (↓)	( )		
				( )	( )	( )		
				( )	( )	( )		
		61939-CRM1	CC	93T 50-150	( )	( )	20-25 (ND)	J/det/A(HP)
		(0-21064)	DD	1029 (↓)	( )	( )		
			EE	892 (↓)	( )	( )		
			A	208 (↓)	( )	( )		
				( )	( )	( )		
		61940-CRM1	CC	T43 50-150	( )	( )	1-19. MB (ND)	J/det/A(HP)
		(0-21062)	DD	932 (↓)	( )	( )		
			EE	611 (↓)	( )	( )		↓
			A	363 (↓)	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 23, 2019

Parameters: Polychlorinated Biphenyls as Congeners

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-020

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
C1_90606MICABOG18CAC	61958	Tissue	02/11/19
C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
C1_90110DANABOG18PCM	61964	Tissue	02/11/19
C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) as Congeners by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not required by the method.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	PCB-018	192 (50-150)	205 (50-150)	NA	-
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	PCB-209	40 (50-150)	45 (50-150)	UJ (all non-detects)	A

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	PCB-123	27 (≤25)	NA	-
C1_912035DNBBOG18KPBMS/MSD (C1_912035DNBBOG18KPB)	PCB-153	30 (≤25)	J (all detects)	A

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBDUP (C1_912035DNBBOG18KPB)	PCB-049	35 (≤25)	J (all detects)	A
	PCB-052	30 (≤25)	J (all detects)	
	PCB-099	3 (≤25)	J (all detects)	
	PCB-101	30 (≤25)	J (all detects)	
	PCB-110	34 (≤25)	J (all detects)	
	PCB-118	27 (≤25)	J (all detects)	
	PCB-151	69 (≤25)	J (all detects)	
	PCB-153	28 (≤25)	J (all detects)	
	PCB-183	55 (≤25)	J (all detects)	

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
61939-CRM1	PCB-056/060	181 (50-150)	C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	NA	-
61939-CRM1	PCB-206 PCB-209	45 (50-150) 49 (50-150)	C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	UJ (all non-detects) UJ (all non-detects)	A

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
61940-CRM1	PCB-056/060	377 (50-150)	C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	NA	-
61940-CRM1	PCB-158	164 (50-150)	C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_912035DNBBOG18KPB C1_90606MISSBOG18WHS	NA	-
61940-CRM1	PCB-158	164 (50-150)	C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC	J (all detects)	A
61940-CRM1	PCB-206 PCB-209	30 (50-150) 4 (50-150)	C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	UJ (all non-detects) UJ (all non-detects)	A

X. Field Replicates

No field replicates were identified in this SDG.

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-020	Compound reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIII. Target Compound Identification

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD %R and RPD, DUP RPD, CRM %R, and results reported below the RL and above the MDL, data were qualified as estimated in twenty-five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Data Qualification Summary - SDG 1807003-020

Sample	Compound	Flag	A or P	Reason (Code)
C1_912035DNBBOG18KPB	PCB-209	UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (LM)
C1_912035DNBBOG18KPB	PCB-153	J (all detects)	A	Matrix spike/Matrix spike duplicate (RPD) (HD)
C1_912035DNBBOG18KPB	PCB-049 PCB-052 PCB-099 PCB-101 PCB-110 PCB-118 PCB-151 PCB-153 PCB-183	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	PCB-206 PCB-209	UJ (all non-detects) UJ (all non-detects)	A	Certified reference material (%R) (LP)
C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC	PCB-158	J (all detects)	A	Certified reference material (%R) (HP)

Sample	Compound	Flag	A or P	Reason (Code)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Laboratory Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Field Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

LDC #: 45435A3b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/29/19
SDG #: 1807003-020 Level II Page: 1 of 2
Laboratory: Physis Environmental Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: GC/MS PCB as Congeners (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates /DUP /CRM	SW/SW/	
IX.	Laboratory control samples /CRM	A/SW	LCS/D. CRM
X.	Field duplicates	N	
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable ND = No compounds detected D = Duplicate SB=Source blank
N = Not provided/applicable R = Rinsate TB = Trip blank OTHER:
SW = See worksheet FB = Field blank EB = Equipment blank

	Client ID	Lab ID	Matrix	Date
1	C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
2	C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
3	C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
4	C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
5	C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
6	C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
7	C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
8	C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
9	C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
10	C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
11	C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
12	C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
13	C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19

LDC #: 45435A3b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/29/19
SDG #: 1807003-020 Level II Page: 2 of 2
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 9
2nd Reviewer: JM6

METHOD: GC/MS PCB as Congeners (EPA SW 846 Method 8270D)

14	C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
15	C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
16	C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
17	C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
18	C1_90606MICABOG18CAC	61958	Tissue	02/11/19
19	C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
20	C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
21	C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
22	C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
23	C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
24	C1_90110DANABOG18PCM	61964	Tissue	02/11/19
25	C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
26	C1_912035DNBBOG18KPBMS	61946MS	Tissue	02/05/19
27	C1_912035DNBBOG18KPBMSD	61946MSD	Tissue	02/05/19
28	C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19
29				
30				
31				

Notes:

LDC #: ~~45435A36~~

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	~~26/27~~	~~PCB056/060~~	~~181 (50-150)~~	( )	( )	6	
			( )	( )	( )		
	26/27	PCB018	192 (50-150)	205 (50-150)	( )	6 (ND)	~~detect~~ A (HM)
		↓ 209	40 (↓)	45 (↓)	( )	↓	↓ A (HM)
		PCB 123	( )	( )	27 (≤25)	↓	~~detect~~ A (HD)
		153	( )	( )	30 (↓)	(det3)	↓
			( )	( )	( )		
			( )	( )	( )		
	28	PCB049	( )	( )	35 (≤25)	6 (det3)	~~detect~~ A (HD)
		052	( )	( )	30 ( )		
		099	( )	( )	30 ( )		
		101	( )	( )	30 ( )		
		110	( )	( )	34 ( )		
		118	( )	( )	27 ( )		
		151	( )	( )	69 ( )		
		153	( )	( )	28 ( )		
		183	( )	( )	55 ( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 43435A36

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: T
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

(Y) N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		61939-CRM1	PCB 5/66	181 (50-150)	( )	( )	20-25 (ND)	dets/A (HP)
			206	45 ( )	( )	( )		√/UH/A (LP)
			209	49 (√)	( )	( )		↓
				( )	( )	( )		
				( )	( )	( )		
		61940-CRM1	PCB 5/66	377 (50-150)	( )	( )	1-19 (ND)	dets/A (HP)
			158	164 ( )	( )	( )	(dets=5-6,8-18)	↓
			206	30 (√)	( )	( )	(ND)	√/UH/A (LP)
			209	4 (↓)	( )	( )	↓	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 23, 2019

Parameters: Metals

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-020

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
C1_90606MICABOG18CAC	61958	Tissue	02/11/19
C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
C1_90110DANABOG18PCM	61964	Tissue	02/11/19
C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
C1_90110DANABOG18WCRDMS	61941MS	Tissue	02/05/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRDMSD	61941MSD	Tissue	02/05/19
C1_90110DANABOG18WCRDDUP	61941DUP	Tissue	02/05/19
C3_91203SDNBOG18PCMMS	61951MS	Tissue	02/05/19
C3_91203SDNBOG18PCMMSD	61951MSD	Tissue	02/05/19
C3_91203SDNBOG18PCMDUP	61951DUP	Tissue	02/05/19
C1_90606MISSBOG18BLSMS	61961MS	Tissue	02/11/19
C1_90606MISSBOG18BLSMSD	61961MSD	Tissue	02/11/19
C1_90606MISSBOG18BLSDUP	61961DUP	Tissue	02/11/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Selenium by Environmental Protection Agency (EPA) SW 846 Method 6020
Mercury by EPA Method 245.7

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

ICP-MS tune data were not reviewed for Level II validation.

III. Instrument Calibration

Instrument calibration data were not reviewed for Level II validation.

IV. ICP Interference Check Sample Analysis

Interference check sample (ICS) analysis data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Serial Dilution

Serial dilution was not performed for this SDG.

X. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits.

XI. Field Replicates

No field replicates were identified in this SDG.

XII. Internal Standards (ICP-MS)

Internal standard data were not reviewed for Level II validation.

XIII. Sample Result Verification

All analytes reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-020	Analyte reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to results reported below the RL and above the MDL, data were qualified as estimated in twenty-five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Metals - Data Qualification Summary - SDG 1807003-020

Sample	Analyte	Flag	A or P	Reason (Code)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Analyte reported below the RL and above the MDL	J (all detects)	A	Sample result verification (DL)

2018 Regional Harbor Monitoring Program
Metals - Laboratory Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Metals - Field Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

LDC #: 45435A4a

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/23/19

SDG #: 1807003-020

Page: 1 of 2

Laboratory: Physis Environmental Laboratories, Inc.

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Metals 6020A/EPA Method 245.1)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A A	
II.	ICP/MS Tune	N	
III.	Instrument Calibration	N	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Laboratory Blanks	A	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	A	
VIII.	Duplicate sample analysis	A	
IX.	Serial Dilution	N	
X.	Laboratory control samples	A	LCS/D, CRM
XI.	Field Duplicates	N	
XII.	Internal Standard (ICP-MS)	N	
XIII.	Sample Result Verification	N	
XIV.	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
2	C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
3	C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
4	C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
5	C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
6	C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
7	C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
8	C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
9	C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
10	C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
11	C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
12	C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
13	C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
14	C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
15	C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19

LDC #: 45435A4a

SDG #: 1807003-020

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/23/19

Page: 2 of 2

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Metals 6020A/EPA Method 245.1)

16	C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
17	C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
18	C1_90606MICABOG18CAC	61958	Tissue	02/11/19
19	C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
20	C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
21	C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
22	C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
23	C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
24	C1_90110DANABOG18PCM	61964	Tissue	02/11/19
25	C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
26	C1_90110DANABOG18WCRDMS	61941MS	Tissue	02/05/19
27	C1_90110DANABOG18WCRDMSD	61941MSD	Tissue	02/05/19
28	C1_90110DANABOG18WCRDDUP	61941DUP	Tissue	02/05/19
29	C3_91203SDNBOG18PCMMS	61951MS	Tissue	02/05/19
30	C3_91203SDNBOG18PCMMSD	61951MSD	Tissue	02/05/19
31	C3_91203SDNBOG18PCMDUP	61951DUP	Tissue	02/05/19
32	C1_90606MISSBOG18BLSMS	61961MS	Tissue	02/11/19
33	C1_90606MISSBOG18BLSMSD	61961MSD	Tissue	02/11/19
34	C1_90606MISSBOG18BLSDUP	61961DUP	Tissue	02/11/19
35				
36				
37				

Notes:

LDC #: 45435A1a

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: ____

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-25		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
QC: 26-28		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
29-31		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
32-34		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti,

Comments: Mercury by CVAA if performed

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 23, 2019

Parameters: Wet Chemistry

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-020

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19
C1_90606MICABOG18CAC	61958	Tissue	02/11/19
C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
C1_90110DANABOG18PCM	61964	Tissue	02/11/19
C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Percent Solids by Standard Method 2540B
Percent Lipids by Gravimetric

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. Initial Calibration

Initial calibration data were not reviewed for Level II validation.

III. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the methods.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Analyte	RPD (Limits)	Flag	A or P
C1_912035DNBBOG18KPBDUP (C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS)	Percent lipids	40 (≤25)	J (all detects)	A

VIII. Certified Reference Materials

Certified reference materials (CRM) were analyzed as required by the methods. The results were within QC limits.

IX. Field Replicates

No field replicates were identified in this SDG.

X. Sample Result Verification

All analytes reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-020	Analyte reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to DUP RPD and results reported below the RL and above the MDL, data were qualified as estimated in twenty-five samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Wet Chemistry - Data Qualification Summary - SDG 1807003-020

Sample	Analyte	Flag	A or P	Reason (Code)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS	Percent lipids	J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_90110DANABOG18WCRD C2_90110DANABOG18WCRD C3_90110DANABOG18WCRD C1_902080CNHBOG18YFC C2_902080CNHBOG18YFC C1_912035DNBBOG18KPB C2_912035DNBBOG18KPB C3_912035DNBBOG18KPB C1_91203SDNBOG18PCM C2_91203SDNBOG18PCM C3_91203SDNBOG18PCM C1_91203SDNBBOG18SSB C2_91203SDNBBOG18SSB C3_91203SDNBBOG18SSB C1_91202SDSBBOG18SSB C2_91202SDSBBOG18SSB C3_91202SDSBBOG18SSB C1_90606MICABOG18CAC C1_90606MISSBOG18WHS C2_90606MISSBOG18WHS C1_90606MISSBOG18BLS C1_90606MISSBOG18BSH C1_902080CNHBOG18SFC C1_90110DANABOG18PCM C1_91203SDNBBOG18SHS	Analyte reported below the RL and above the MDL	J (all detects)	A	Sample result verification (DL)

2018 Regional Harbor Monitoring Program
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Wet Chemistry - Field Blank Data Qualification Summary - SDG 1807003-020

No Sample Data Qualified in this SDG

LDC #: 45435A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/19
SDG #: 1807003-020 Level II Page: 1 of 2
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Percent Solids (SM 2540B), Percent Lipids (Gravimetric)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A, A	
II	Initial calibration	N	
III.	Calibration verification	N	
IV	Laboratory Blanks	A	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	N	not required
VII.	Duplicate sample analysis	SW	
VIII.	Laboratory control samples	A	QRM
IX.	Field duplicates	N	
X.	Sample result verification	N	
XI	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_90110DANABOG18WCRD	61941	Tissue	02/05/19
2	C2_90110DANABOG18WCRD	61942	Tissue	02/05/19
3	C3_90110DANABOG18WCRD	61943	Tissue	02/05/19
4	C1_902080CNHBOG18YFC	61944	Tissue	02/05/19
5	C2_902080CNHBOG18YFC	61945	Tissue	02/05/19
6	C1_912035DNBBOG18KPB	61946	Tissue	02/05/19
7	C2_912035DNBBOG18KPB	61947	Tissue	02/05/19
8	C3_912035DNBBOG18KPB	61948	Tissue	02/05/19
9	C1_91203SDNBOG18PCM	61949	Tissue	02/05/19
10	C2_91203SDNBOG18PCM	61950	Tissue	02/05/19
11	C3_91203SDNBOG18PCM	61951	Tissue	02/05/19
12	C1_91203SDNBBOG18SSB	61952	Tissue	02/05/19
13	C2_91203SDNBBOG18SSB	61953	Tissue	02/05/19
14	C3_91203SDNBBOG18SSB	61954	Tissue	02/05/19
15	C1_91202SDSBBOG18SSB	61955	Tissue	02/05/19
16	C2_91202SDSBBOG18SSB	61956	Tissue	02/05/19
17	C3_91202SDSBBOG18SSB	61957	Tissue	02/05/19

LDC #: 45435A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/19
SDG #: 1807003-020 Level II Page: 2 of 2
Laboratory: Physis Environmental Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: (Analyte) Percent Solids (SM 2540B), Percent Lipids (Gravimetric)

18	C1_90606MICABOG18CAC	61958	Tissue	02/11/19
19	C1_90606MISSBOG18WHS	61959	Tissue	02/11/19
20	C2_90606MISSBOG18WHS	61960	Tissue	02/11/19
21	C1_90606MISSBOG18BLS	61961	Tissue	02/11/19
22	C1_90606MISSBOG18BSH	61962	Tissue	02/11/19
23	C1_902080CNHBOG18SFC	61963	Tissue	02/11/19
24	C1_90110DANABOG18PCM	61964	Tissue	02/11/19
25	C1_91203SDNBBOG18SHS	61965	Tissue	02/11/19
26	C1_912035DNBBOG18KPBDUP	61946DUP	Tissue	02/05/19
27				
28				
29				

Notes:

LDC #: 45435A6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: Q

All circled methods are applicable to each sample.

Sample ID	Parameter
1-25	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 %Lipids TS
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
QC:26	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 %Lipids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 45435A6

VALIDATION FINDINGS WORKSHEET
Duplicate Analysis

Reviewer:
2nd Reviewer:

METHOD: Inorganics, Method see cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a duplicate sample analyzed for each matrix in this SDG?

Y N N/A Were all duplicate sample relative percent differences (RPD) ≤ 20% for water and ≤ 35% for soil samples (≤ 10% for Method 300.0)? If no, see qualification below. A control limit of ±CRDL (±2X CRDL for soil) was used for samples that were ≤5X the CRDL, including when only one of the duplicate sample values were ≤5X the CRDL. If field blanks were used for laboratory duplicates, see overall assessment.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

#	Date	Duplicate ID	Matrix	Analyte	RPD (Limits)	Difference (Limits)	Associated Samples	Qualifications
		26		Percent Lipids	40 (≤25)		1-19	J (all detects) / A (Dol)

HD

Comments:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 25, 2019

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
C1_9011DANABOG18BLS	62401	Tissue	03/06/19
C1_9011DANABOG18BSB	62402	Tissue	03/06/19
C1_9011DANABOG18SHS	62403	Tissue	03/06/19
C1_9011DANABOG18SSB	62404	Tissue	03/06/19
C1_9011DANABOG18WHS	62405	Tissue	03/06/19
DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
C1_91202SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
C1_91202SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
C1_91202SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. Surrogate recoveries (%R) were not within QC limits for several samples. Using professional judgment, no data were qualified when one surrogate %R was outside the QC limits and the %R was greater than or equal to 10%.

VIII. Matrix Spike/Matrix Spike Duplicates/ Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSMS/MSD (C1_91202SDSBBOG18LPS)	Chrysene	161 (50-150)	-	NA	-

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSMS/MSD (C1_91202SDSBBOG18LPS)	Benzo(b)fluoranthene	26 (≤25)	NA	-

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62345-BS1/BS2 (C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC)	1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	- - -	67 (70-130) 68 (70-130) 56 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P

Relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
62345-BS1/BS2 (C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC)	Naphthalene	35 (≤25)	NA	-

X. Field Replicates

Samples C2_91203SDNBBOG18BSB and DUP-C2_91203SDNBBOG18BSB and samples C1_91203SDNBBOG18NAC and DUP-C1_91203SDNBBOG18NAC were identified as field replicates. No results were detected in any of the samples.

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

XIII. Target Compound Identifications

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to LCS/LCSD %R and results reported below the RL and above the MDL, data were qualified as estimated in fifty-one samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC	1-Methylnaphthalene 2-Methylnaphthalene Naphthalene	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R) (LL)

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45435B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/2/19
SDG #: 1807003-021 Level II Page: 1 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 9
2nd Reviewer: JM

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates /OHP	SW/A	
IX.	Laboratory control samples	SW	LCSD
X.	Field duplicates	ND	D=16+50. 17+52 5]
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
2	C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
3	C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
4	C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
5	C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
6	C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
7	C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
8	C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
9	C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
10	C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
11	C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
12	C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
13	C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19

LDC #: 45435B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 4/21/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 9
2nd Reviewer: JVC

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D)

	Client ID	Lab ID	Matrix	Date
14	C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
15	C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
16	C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
17	C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
18	C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
19	C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
20	C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
21	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
22	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
23	C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
24	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
25	C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
26	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
27	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
28	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
29	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
30	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
31	C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
32	C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
33	C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
34	C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
35	C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
36	C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
37	C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
38	C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
39	C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
40	C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
41	C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
42	C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
43	C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
45	C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
46	C1_9011DANABOG18BLS	62401	Tissue	03/06/19
47	C1_9011DANABOG18BSB	62402	Tissue	03/06/19
48	C1_9011DANABOG18SHS	62403	Tissue	03/06/19
49	C1_9011DANABOG18SSB	62404	Tissue	03/06/19

LDC #: 45435B2b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/21/19
SDG #: 1807003-021 Level II Page: 3 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: JM

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D)

	Client ID	Lab ID	Matrix	Date
49				
50	C1_9011DANABOG18WHS	62405	Tissue	03/06/19
51	DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
52	DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
53	C1_91212SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
54	C1_91212SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
55	C1_91212SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
56	C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
57	C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
58	C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
59	C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
60	C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
61	C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19
62				
63				
64				

Notes:

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 45485B2-7

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were percent recoveries (%R) for surrogates within QC limits?
Y N N/A If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N N/A If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		2	d12-DDD	152 (31-134)	No qual
		3		154 ( )	
		4		164 ( )	
		5		263 ( )	
		6		275 ( )	
		7		194 ( )	
		8		211 ( )	
		9		224 ( )	
		10		244 ( )	
		11		147 ( )	
		12		181 ( )	
		13		185 ( )	
		19	↓	137 ( ) ↓	↓

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 45435B2b

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.
(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	52/53	DDD	161 (50-150)	( )	( )	11 (ND)	J dets/A (HM)
		~~444~~	( )	( )	26 (≤25)		↓ (HD)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: ~~45435B~~2b

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: Q
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
(Y) N N/A Was a LCS required?
Y (N) N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		362345-BS1/-BS2	TTT	( )	67 (70-130)	( )	1-13, MB	J/UJ/P (ℓ)
			W	( )	68 (↓)	( )		↓
			S	( )	56 (↓)	( )		↓
			S	( )	( )	35 (≤25)		J dets/P (HD)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 25, 2019

Parameters: Polybrominated Diphenyl Ethers

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
C1_9011DANABOG18BLS	62401	Tissue	03/06/19
C1_9011DANABOG18BSB	62402	Tissue	03/06/19
C1_9011DANABOG18SHS	62403	Tissue	03/06/19
C1_9011DANABOG18SSB	62404	Tissue	03/06/19
C1_9011DANABOG18WHS	62405	Tissue	03/06/19
DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
C1_91202SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
C1_91202SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
C1_91202SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polybrominated Diphenyl Ethers (PBDE) by Environmental Protection Agency (EPA) SW 846 Method 8270D-NCI

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
C1_91202SDSBBOG18NAC	DFPBDE	42 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C2_91202SDSBBOG18NAC	DFPBDE	46 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C1_90606MISSBOG18SHS	DFPBDE FTBDE	.3 (53-141) 135 (61-132)	All compounds	UJ (all non-detects)	P
C2_90208OCNHBOG18BSB	DFPBDE	48 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C3_90208OCNHBOG18BSB	DFPBDE	43 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
C1_90208OCNHBOG18SHS	DFPBDE	45 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C1_90208OCNHBOG18CAH	DFPBDE	48 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C1_90208OCNHBOG18SSB	DFPBDE FTBDE	35 (53-141) 141 (61-132)	All compounds	J (all detects) UJ (all non-detects)	P
C2_90208OCNHBOG18SSB	DFPBDE	47 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C3_90208OCNHBOG18SSB	DFPBDE	47 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C1_90208OCNHBOG18WHS	DFPBDE	46 (53-141)	All compounds	UJ (all non-detects)	P
C1_9011DANABOG18BLS	DFPBDE	50 (53-141)	All compounds	UJ (all non-detects)	P
C1_9011DANABOG18BSB	DFPBDE	50 (53-141)	All compounds	UJ (all non-detects)	P
C1_9011DANABOG18SHS	DFPBDE	50 (53-141)	All compounds	J (all detects) UJ (all non-detects)	P
C1_9011DANABOG18SSB	DFPBDE	51 (53-141)	All compounds	UJ (all non-detects)	P
C1_9011DANABOG18WHS	DFPBDE	51 (53-141)	All compounds	UJ (all non-detects)	P
DUP-C1_91203SDNBBOG18NAC	DFPBDE FTBDE	39 (53-141) 156 (61-132)	All compounds	J (all detects) UJ (all non-detects)	P

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicates Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_90208OCNHBOG18BSBMS/MSD (C1_90208OCNHBOG18BSB)	PBDE 209	69 (≤25)	NA	-

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSDUP (C1_91202SDSBBOG18LPS)	PBDE 047 PBDE 100	27 (≤25) 63 (≤25)	J (all detects) J (all detects)	A
C1_91203SDNBBOG18BSBDUP (C1_91203SDNBBOG18BSB)	PBDE 047 PBDE 099 PBDE 100	77 (≤25) 74 (≤25) 30 (≤25)	J (all detects) J (all detects) J (all detects)	A

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62346-BS1/BS2 (C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC)	PBDE 209	43 (70-130)	-	UJ (all non-detects)	P
62347-BS1/BS2 (C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC)	PBDE 209	61 (70-130)	-	UJ (all non-detects)	P

Relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
62345-BS1/BS2 (C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC)	PBDE 209	43 (≤25)	NA	-
62346-BS1/BS2 (C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC)	PBDE 209	53 (≤25)	NA	-
62347-BS1/BS2 (C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC)	PBDE 209	52 (≤25)	NA	-

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
62354-CRM1	PBDE 153	35 (50-150)	C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC	UJ (all non-detects)	A
62355-CRM1	PBDE 153	34 (50-150)	C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC	J (all detects) UJ (all non-detects)	A
62356-CRM1	PBDE 100 PBDE 153	45 (50-150) 38 (50-150)	C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

X. Field Replicates

Samples C2_91203SDNBBOG18BSB and DUP-C2_91203SDNBBOG18BSB and samples C1_91203SDNBBOG18NAC and DUP-C1_91203SDNBBOG18NAC were identified as field replicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/g)		RPD
	C2_91203SDNBBOG18BSB	DUP-C2_91203SDNBBOG18BSB	
PBDE 099	0.1U	0.156	Not calculable
PBDE 100	0.1U	0.18	Not calculable

Compound	Concentration (ng/g)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
PBDE 047	1.03	0.847	19
PBDE 049	0.176	0.161	9
PBDE 099	0.1U	0.133	Not calculable
PBDE 100	0.1U	0.222	Not calculable
PBDE 154	0.1U	0.0593	Not calculable

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIII. Target Compound Identifications

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to surrogate %R, DUP RPD, LCS/LCSD %R, CRM %R, and results reported below the RL and above the MDL, data were qualified as estimated in fifty-one samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_90606MISSBOG18SHS C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C1_91203SDNBBOG18NAC C1_90208OCNHBOG18SSB	All compounds	J (all detects) UJ (all non-detects)	P	Surrogates (%R) (LS)
C1_91202SDSBBOG18LPS	PBDE 047 PBDE 100	J (all detects) J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_91203SDNBBOG18BSB	PBDE 047 PBDE 099 PBDE 100	J (all detects) J (all detects) J (all detects)	A	Duplicate sample analysis (RPD) (HD)

Sample	Compound	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	PBDE 209	UJ (all non-detects)	P	Laboratory control samples (%R) (LL)

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC	PBDE 153	UJ (all non-detects)	A	Certified reference material (%R) (LP)
C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	PBDE 100 PBDE 153	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Certified reference material (%R) (LP)

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45435B2c

SDG #: 1807003-021

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/21/19

Page: 1 of 3

Reviewer: [illegible]

2nd Reviewer: JV6

METHOD: GC/MS Polybrominated Diphenyl Ethers (EPA SW 846 Method 8270D-NCI)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	/	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks		
VI.	Field blanks		
VII.	Surrogate spikes		
VIII.	Matrix spike/Matrix spike duplicates		
IX.	Laboratory control samples		
X.	Field duplicates		D=16+50.1T+5
XI.	Internal standards		
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data		

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
2	C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
3	C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
4	C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
5	C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
6	C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
7	C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
8	C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
9	C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
10	C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
11	C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
12	C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
13	C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19

LDC #: 45435B2c **VALIDATION COMPLETENESS WORKSHEET** Date: 7/21/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: JVG

METHOD: GC/MS Polybrominated Diphenyl Ethers (EPA SW 846 Method 8270D-NCI)

14	C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
15	C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
16	C2_91203SDNBBOG18BSB D1	62372	Tissue	03/06/19
17	C1_91203SDNBBOG18NAC D2	62373	Tissue	03/06/19
18	C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
19	C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
20	C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
21	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
22	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
23	C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
24	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
25	C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
26	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
27	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
28	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
29	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
30	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
31	C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
32	C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
33	C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
34	C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
35	C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
36	C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
37	C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
38	C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
39	C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
40	C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
41	C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
42	C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
43	C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
44	C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
45	C1_9011DANABOG18BLS	62401	Tissue	03/06/19
46	C1_9011DANABOG18BSB	62402	Tissue	03/06/19
47	C1_9011DANABOG18SHS	62403	Tissue	03/06/19
48	C1_9011DANABOG18SSB	62404	Tissue	03/06/19

LDC #: 45435B2c **VALIDATION COMPLETENESS WORKSHEET** Date: 7/11/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: Q
2nd Reviewer: JM

METHOD: GC/MS Polybrominated Diphenyl Ethers (EPA SW 846 Method 8270D-NCI)

49	C1_9011DANABOG18WHS	62405	Tissue	03/06/19
50	DUP-C2_91203SDNBBOG18BSB D1	62406	Tissue	03/06/19
51	DUP-C1_91203SDNBBOG18NAC D2	62407	Tissue	03/06/19
52	C1_91212SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
53	C1_91212SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
54	C1_91212SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
55	C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
56	C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
57	C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
58	C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
~~60~~ 59	C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
~~61~~ 60	C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19
62				
63				
64				

Notes:

LDC #: 46485B2C

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Page: 1 of 1
Reviewer: 9
2nd Reviewer: SR

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A — Were percent recoveries (%R) for surrogates within QC limits?
Y (N) N/A — If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) — If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		5	DFPBDE	42 (53-141)	J/UJ/P (det3+ND)(<S)
		6	↓	46 ( )	↓
		30	DFPBDE	36 (53-141)	J/UJ/P (ND) (<S)
			FTBDE	135 (61-132)	↓
		35	DFPBDE	48 (53-141)	J/UJ/P (det3+ND) (<S)
		36	↓	43 ( )	↓
		39	↓	45 ( )	↓
		40	↓	48 ( )	↓
		41	↓	35 ( )	J/UJ/P (det3+ND) (<S/~~NS~~)
			FTBDE	141 (61-132)	↓
		42	DFPBDE	47 ( )	J/UJ/P (det3+ND) (<S)
		43	↓	47 ( )	↓
		44	↓	46 ( )	(ND)
		45	↓	50 ( )	↓
		46	↓	50 ( )	↓

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 45425B2c

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A — Were percent recoveries (%R) for surrogates within QC limits?
Y (N) N/A — If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A) — If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		47	~~DFB~~ DFPBDE	52 (53-141)	J/UJ/P (dets+ND) (LS)
				( )	
		48	DFPBDE	51 ( )	(ND)
				( )	
		49	↓	51 ( )	(ND)
				( )	
		51	DFPBDE	39 (53-141)	J/UJ/P (dets+ND) (LS)
			FTBDE	156 (61-132)	↓
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5
(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #: 45435B2c

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

(Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	~~53~~ 54	PBDE047	( )	~~dets 4~~ ~~dets 4 (?)~~	27 (≤25)	11 (dets) ~~#?~~	J dets/A (HD)
		↓ 100	( )	← ( )	63 (↓)	~~(dets 4 13)~~	↓
			( )	( )	( )		
	57	PBDE047	( )	( )	77 (≤25)	15 (dets)	J dets/A (HD)
		099	( )	( )	74 ( )		
		↓ 100	( )	( )	30 (↓)		↓
			( )	( )	( )		
	58/59	PBDE209	( )	( )	69 (≤25)	34 (ND)	J dets/A (HD)
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 42435B2c

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: 9
2nd Reviewer: JV4

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		62345-BS1/-BS2	PBDE209	( )	( )	43 (≤25)	1-13, MB (ND)	J+ (HD)
				( )	( )	( )		
				( )	( )	( )		
		62346-BS1/-BS2	PBDE209	43 (70-130)	( )	( )	14-33. MB (ND)	J/UJ/A (all)
			↓	( )	( )	53 (≤25)		J+ (HD)
				( )	( )	( )		
		62347-BS1/-BS2	PBDE209	61 (70-130)	( )	( )	34-5. MB (ND)	J/UJ/A (all)
			↓	( )	( )	52 (≤25)		J+ (HD)
				( )	( )	( )		
		62354-CRM1	PBDE153	35 (50-150)	( )	( )	1-13. (ND)	J/UJ/A (all)
				( )	( )	( )		
				( )	( )	( )		
		62355-CRM1	PBDE153	34 (50-150)	( )	( )	14-32. (dd=20)	J/UJ/A (all)
				( )	( )	( )		
				( )	( )	( )		
		62356-CRM1	PBDE100	45 (50-150)	( )	( )	33-5 (dd=35-36, (153=ND) 39,41-43,47, 50-5)	J/UJ/A (all)
			↓ 153	38 (↓)	( )	( )		↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC#: 45435B2C

VALIDATION FINDINGS WORKSHEET
Field Replicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JM

METHOD: GC/MS PBDE

Compound	Concentration (ng/g)		RPD
	16	50	
PBDE099	0.1U	0.156	NC
PBDE100	0.1U	0.18	NC

Compound	Concentration (ng/g)		RPD
	17	51	
PBDE047	1.03	0.847	19
PBDE049	0.176	0.161	9
PBDE099	0.1U	0.133	NC
PBDE100	0.1U	0.222	NC
PBDE154	0.1U	0.0593	NC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 25, 2019

Parameters: Chlorinated Pesticides

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
C1_9011DANABOG18BLS	62401	Tissue	03/06/19
C1_9011DANABOG18BSB	62402	Tissue	03/06/19
C1_9011DANABOG18SHS	62403	Tissue	03/06/19
C1_9011DANABOG18SSB	62404	Tissue	03/06/19
C1_9011DANABOG18WHS	62405	Tissue	03/06/19
DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
C1_91202SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
C1_91202SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
C1_91202SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Chlorinated Pesticides by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSMS/MSD (C1_91202SDSBBOG18LPS)	beta-BHC Endrin aldehyde	32 (50-150) 22 (50-150)	36 (50-150) 19 (50-150)	UJ (all non-detects) UJ (all non-detects)	A
C1_91202SDSBBOG18LPSMS/MSD (C1_91202SDSBBOG18LPS)	Dicofol	294 (50-150)	230 (50-150)	NA	-

Spike ID (Associated Samples)	Compound	MS (%R) (Limits)	MSD (%R) (Limits)	Flag	A or P
C1_91203SDNBBOG18BSBMS/MSD (C1_91203SDNBBOG18BSB)	Endrin aldehyde	37 (50-150)	41 (50-150)	UJ (all non-detects)	A
C1_90208OCNHBOG18BSBMS/MSD (C1_90208OCNHBOG18BSB)	Dicofol Methoxychlor Perthane Heptachlor	225 (50-150) 158 (50-150) 163 (50-150) -	221 (50-150) 174 (50-150) 164 (50-150) 154 (50-150)	NA	-
C1_90208OCNHBOG18BSBMS/MSD (C1_90208OCNHBOG18BSB)	Endrin aldehyde	44 (50-150)	48 (50-150)	UJ (all non-detects)	A

Relative percent differences (RPD) were within QC limits.

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSDUP (C1_91202SDSBBOG18LPS)	4,4'-DDE	46 (≤25)	J (all detects)	A
C1_91203SDNBBOG18BSBDUP (C1_91203SDNBBOG18BSB)	trans-Nonachlor	34 (≤25)	J (all detects)	A

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62345-BS1/BS2 (C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC)	Endosulfan I Endosulfan II Endrin aldehyde	66 (70-130) 54 (70-130) 29 (70-130)	65 (70-130) 58 (70-130) 30 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62346-BS1/BS2 (C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC)	Endosulfan I Endosulfan II Endrin aldehyde	60 (70-130) 55 (70-130) 25 (70-130)	60 (70-130) 55 (70-130) 26 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
62346-BS1/BS2 (C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC)	Methoxychlor	-	134 (70-130)	NA	-
62347-BS1/BS2 (C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC)	4,4'-DDT Methoxychlor	152 (70-130) 171 (70-130)	155 (70-130) 180 (70-130)	NA	-

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62347-BS1/BS2 (C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC)	Endosulfan I Endosulfan II Endrin aldehyde	65 (70-130) 56 (70-130) 31 (70-130)	53 (70-130) 64 (70-130) 33 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P

Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
62355-CRM1	2,4'-DDD 2,4'-DDT alpha-BHC	444 (50-150) 1070 (50-150) 484 (50-150)	C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC	NA	-

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
62356-CRM1	2,4'-DDD 2,4'-DDE 2,4'-DDT 4,4'-DDT	991 (50-150) 676 (50-150) 609 (50-150) 155 (50-150)	C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	NA	-
62354-CRM1	2,4'-DDD 2,4'-DDE 2,4'-DDT alpha-BHC	937 (50-150) 1029 (50-150) 892 (50-150) 208 (50-150)	C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC	NA	-

X. Field Replicates

Samples C2_91203SDNBBOG18BSB and DUP-C2_91203SDNBBOG18BSB and samples C1_91203SDNBBOG18NAC and DUP-C1_91203SDNBBOG18NAC were identified as field replicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/g)		RPD
	C2_91203SDNBBOG18BSB	DUP-C2_91203SDNBBOG18BSB	
4,4'-DDE	1.91	1.45	27
cis-Nonachlor	0.192U	0.229	Not calculable
trans-Nonachlor	0.22	0.297	30

Compound	Concentration (ng/g)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
4,4'-DDE	4.94	5.94	18
alpha-Chlordane	0.682	0.727	6
gamma-Chlordane	0.45	0.336	29
cis-Nonachlor	1	0.976	2
trans-Nonachlor	0.636	1.17	59

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIII. Target Compound Identification

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to MS/MSD %R, DUP RPD, LCS/LCSD %R, and results reported below the RL and above the MDL, data were qualified as estimated in fifty-one samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18LPS	beta-BHC Endrin aldehyde	UJ (all non-detects) UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (LM)
C1_91203SDNBBOG18BSB C1_90208OCNHBOG18BSB	Endrin aldehyde	UJ (all non-detects)	A	Matrix spike/Matrix spike duplicate (%R) (LM)
C1_91202SDSBBOG18LPS	4,4'-DDE	J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_91203SDNBBOG18BSB	trans-Nonachlor	J (all detects)	A	Duplicate sample analysis (RPD) (HD)

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC	Endosulfan I	UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C1_91202SDSBBOG18RSR	Endosulfan II	UJ (all non-detects)		
C2_91202SDSBBOG18RSR	Endrin aldehyde	UJ (all non-detects)		
C1_91202SDSBBOG18YFC				
C1_91202SDSBBOG18NAC				
C2_91202SDSBBOG18NAC				
C1_91202SDSBBOG18PCM				
C1_91202SDSBBOG18SAC				
C2_91202SDSBBOG18SAC				
C3_91202SDSBBOG18SAC				
C1_91202SDSBBOG18LPS				
C1_91203SDNBBOG18LPS				
C1_91203SDNBBOG18BKC				
C1_91203SDNBBOG18BLS				
C1_91203SDNBBOG18BSB				
C2_91203SDNBBOG18BSB				
C1_91203SDNBBOG18NAC				
C2_91203SDNBBOG18NAC				
C1_91203SDNBBOG18RSR				
C2_91203SDNBBOG18RSR				
C1_91203SDNBBOG18QEF				
C2_91203SDNBBOG18QEF				
C3_91203SDNBBOG18QEF				
C1_91203SDNBBOG18SAC				
C1_90606MISSBOG18SSB				
C2_90606MISSBOG18SSB				
C3_90606MISSBOG18SSB				
C1_90606MISSBOG18RSR				
C1_90606MISSBOG18SEL				
C1_90606MISSBOG18SHS				
C1_90606MISSBOG18YFC				
C2_90606MISSBOG18YFC				
C3_90606MISSBOG18YFC				
C1_90208OCNHBOG18BSB				
C2_90208OCNHBOG18BSB				
C3_90208OCNHBOG18BSB				
C2_90208OCNHBOG18SFC				
C3_90208OCNHBOG18SFC				
C1_90208OCNHBOG18SHS				
C1_90208OCNHBOG18CAH				
C1_90208OCNHBOG18SSB				
C2_90208OCNHBOG18SSB				
C3_90208OCNHBOG18SSB				
C1_90208OCNHBOG18WHS				
C1_9011DANABOG18BLS				
C1_9011DANABOG18BSB				
C1_9011DANABOG18SHS				
C1_9011DANABOG18SSB				
C1_9011DANABOG18WHS				
DUP-C2_91203SDNBBOG18BSB				
DUP-C1_91203SDNBBOG18NAC				

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45435B3a **VALIDATION COMPLETENESS WORKSHEET** Date: 7/29/19
SDG #: 1807003-021 Level II Page: 1 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: Q
2nd Reviewer: QV6

METHOD: GC/MS Chlorinated Pesticides (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates /BKP	SW/SW	
IX.	Laboratory control samples /CRM	SW/SW	Less/D. CRM
X.	Field duplicates	SW	D=50+16 SH IT
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
2	C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
3	C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
4	C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
5	C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
6	C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
7	C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
8	C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
9	C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
10	C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
11	C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
12	C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
13	C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19

LDC #: 45435B3a **VALIDATION COMPLETENESS WORKSHEET** Date: 7/20/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 9
2nd Reviewer: SW

METHOD: GC/MS Chlorinated Pesticides (EPA SW 846 Method 8270D)

14	C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
15	C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
16	C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
17	C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
18	C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
19	C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
20	C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
21	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
22	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
23	C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
24	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
25	C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
26	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
27	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
28	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
29	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
30	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
31	C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
32	C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
33	C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
34	C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
35	C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
36	C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
37	C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
38	C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
39	C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
40	C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
41	C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
42	C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
43	C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
44	C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
45	C1_9011DANABOG18BLS	62401	Tissue	03/06/19
46	C1_9011DANABOG18BSB	62402	Tissue	03/06/19
47	C1_9011DANABOG18SHS	62403	Tissue	03/06/19
48	C1_9011DANABOG18SSB	62404	Tissue	03/06/19

LDC #: 45435B3a

SDG #: 1807003-021

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/29/19

Page: 3 of 3

Reviewer: [illegible]

2nd Reviewer: SVG

METHOD: GC/MS Chlorinated Pesticides (EPA SW 846 Method 8270D)

49	C1_9011DANABOG18WHS	62405	Tissue	03/06/19
50	DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
51	DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
52	C1_91212SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
53	C1_91212SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
54	C1_91212SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
55	C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
56	C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
57	C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
58	C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
60	C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
61	C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19
62				
63				
64				

Notes:

1	0-21064						
2	0-21066						
3	0-21068						

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticides

A. alpha-HCH	K. Endrin	U. Toxaphene	EE. 2,4'-DDT	OO. oxy-Chlordane
B. beta-HCH	L. Endosulfan II	V. Aroclor-1016	FF. Hexachlorobenzene	PP. cis-Nonachlor
C. delta-HCH	M. 4,4'-DDD	W. Aroclor-1221	GG. Chlordane	QQ. trans-Nonachlor
D. gamma-HCH	N. Endosulfan sulfate	X. Aroclor-1232	HH. Chlordane (Technical)	RR. cis-Chlordane
E. Heptachlor	O. 4,4'-DDT	Y. Aroclor-1242	II. p,p'-DDE	SS. trans-Chlordane
F. Aldrin	P. Methoxychlor	Z. Aroclor-1248	JJ. p,p'-DDD	TT. alpha-Endosulphan
G. Heptachlor epoxide	Q. Endrin ketone	AA. Aroclor-1254	KK. p,p'-DDT	UU. beta-Endosulphan
H. Endosulfan I	R. Endrin aldehyde	BB. Aroclor-1260	LL. o,p'-DDT	VV. Endosulphan Sulphate
I. Dieldrin	S. alpha-Chlordane	CC. 2,4'-DDD	MM. o,p'-DDE	WW. Mirex
J. 4,4'-DDE	T. gamma-Chlordane	DD. 2,4'-DDE	NN. o,p'-DDD	

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Reviewer: [illegible]
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)
Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

- (Y) N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.
- (Y) N N/A Was a MS/MSD analyzed every 20 samples of each matrix?
- Y (N) N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	52/53	B	32 (50-150)	36 (50-150)	( )	11 (ND)	J/UJ/A (LM)
		Dicofol	294 ( )	230 ( )	( )		J dets/A (HM)
		R	22 ( )	19 ( )	( )		J/UJ/A (LM)
			( )	( )	( )		
			( )	( )	( )		
	54	J	( )	( )	46 (≤25)	11 (dets)	J dets/A (HD)
			( )	( )	( )		
	~~56~~ 55/56	R	37 (50-150)	41 (50-150)	( )	15 (ND)	J/UJ/A (LM)
			( )	( )	( )		
	57	RR	( )	( )	34 (≤25)	15 (dets)	J dets/A (HD)
			( )	( )	( )		
	58/59	Dicofol	225 (50-150)	221 (50-150)	( )	34 (ND)	J dets/A (HM)
		R	44 ( )	48 ( )	( )		J/UJ/A (LM)
		P	158 ( )	174 ( )	( )		J dets/A (HM)
		Perthane	163 ( )	164 ( )	( )		
		E	( )	154 ( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: 43235B30

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: 9
2nd Reviewer: 0V6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		62345-BS1/-BS2	H	66 (70-130)	65 (70-130)	( )	1-13. MB	J (all) P (LL)
			L	54 ( )	58 ( )	( )		
			R	29 ( )	30 ( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		62346-BS1/-BS2	H	60 (70-130)	60 (70-130)	( )	14-32. MB (ND)	J (all) P (LL)
			L	55 ( )	55 ( )	( )		
			R	25 ( )	26 ( )	( )		
			Φ	( )	134 (70-130)	( )		J detect P (HL)
				( )	( )	( )		
		62347-BS1/-BS2	O	152 (70-130)	155 (70-130)	( )	33-51. MB (ND)	J detect P (HL)
			H	65 ( )	53 ( )	( )		J (all) P (LL)
			L	56 ( )	64 ( )	( )		
			R	31 ( )	33 ( )	( )		
			Φ	171 ( )	180 ( )	( )		J detect P (HL)
				( )	( )	( )		
		62355-BM1	CC	444 (50-150)	( )	( )	14-33 (ND)	J detect A (HP)
			EE	107 ( )	( )	( )		
			A	484 ( )	( )	( )		
				( )	( )	( )		
		62356-BM1	CC	991 (50-150)	( )	( )	33-51. (ND	J detect A (HP)
			DD	676 ( )	( )	( )		
			EE	609 ( )	( )	( )		
			O	155 ( )	( )	( )		
				( )	( )	( )		

LDC #: ~~454~~ 35B39

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 2 of 2
Reviewer: q
2nd Reviewer: DVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		62354-CRM1	CC	937 (50-150)	( )	( )	1-13 (ND)	J dets/A (HP)
			DD	1029 (↓)	( )	( )		↓
			EE	892 (↓)	( )	( )		↓
			A	208 (↓)	( )	( )		↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC#: 4C43B3J1

VALIDATION FINDINGS WORKSHEET
Field Replicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS Pesticides

Compound	Concentration (ng/g)		RPD
	16	50	
J	1.91	1.45	27
PP	0.192U	0.229	NC
QQ	0.22	0.297	30

Compound	Concentration (ng/g)		RPD
	17	51	
J	4.94	5.94	18
S	0.682	0.727	6
T	0.45	0.336	29
PP	1	0.976	2
QQ	0.636	1.17	59

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 25, 2019

Parameters: Polychlorinated Biphenyls as Congeners

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
C1_9011DANABOG18BLS	62401	Tissue	03/06/19
C1_9011DANABOG18BSB	62402	Tissue	03/06/19
C1_9011DANABOG18SHS	62403	Tissue	03/06/19
C1_9011DANABOG18SSB	62404	Tissue	03/06/19
C1_9011DANABOG18WHS	62405	Tissue	03/06/19
DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
C1_91202SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
C1_91202SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
C1_91202SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) as Congeners by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC Instrument Performance Check

Instrument performance check data were not reviewed for Level II validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Level II validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not required by the method.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits.

Relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSMS/MSD (C1_91202SDSBBOG18LPS)	PCB-119	30 (≤25)	NA	-

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

DUP ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
C1_91202SDSBBOG18LPSDUP (C1_91202SDSBBOG18LPS)	PCB-099 PCB-118 PCB-138 PCB-153	28 (≤25) 37 (≤25) 49 (≤25) 32 (≤25)	J (all detects) J (all detects) J (all detects) J (all detects)	A
C1_91203SDNBBOG18BSBDUP (C1_91203SDNBBOG18BSB)	PCB-049 PCB-087 PCB-097 PCB-158 PCB-180	40 (≤25) 38 (≤25) 39 (≤25) 42 (≤25) 40 (≤25)	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A
C1_90208OCNHBOG18BSBDUP (C1_90208OCNHBOG18BSB)	PCB-110 PCB-158	33 (≤25) 51 (≤25)	J (all detects) J (all detects)	A

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
62354-CRM1	PCB-018 PCB-056/060	23419 (50-150) 181 (50-150)	C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC	NA	-
62354-CRM1	PCB-206 PCB-209	45 (50-150) 49 (50-150)	C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
62355-CRM1	PCB-056/060	175 (50-150)	C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC	NA	-
62355-CRM1	PCB-056/060	175 (50-150)	C1_91203SDNBBOG18SAC	J (all detects)	A
62355-CRM1	PCB-066	153 (50-150)	C1_91203SDNBBOG18BLS C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC	J (all detects)	A
62355-CRM1	PCB-066	153 (50-150)	C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18RSR C2_91203SDNBBOG18QEF C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC	NA	-
62356-CRM1	PCB-018	15294 (50-150)	C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	NA	-

CRM ID	Compound	%R (Limits)	Associated Samples	Flag	A or P
62356-CRM1	PCB-056/060 PCB-157 PCB-168/132	35 (50-150) 45 (50-150) 33 (50-150)	C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	J (all detects) UJ (all non-detects)	A

X. Field Replicates

Samples C2_91203SDNBBOG18BSB and DUP-C2_91203SDNBBOG18BSB and samples C1_91203SDNBBOG18NAC and DUP-C1_91203SDNBBOG18NAC were identified as field replicates. No results were detected in any of the samples with the following exceptions:

Compound	Concentration (ng/g)		RPD
	C2_91203SDNBBOG18BSB	DUP-C2_91203SDNBBOG18BSB	
PCB-049	0.661	0.608	8
PCB-052	0.791	0.591	29
PCB-066	0.5U	0.756	Not calculable
PCB-074	0.5U	0.289	Not calculable
PCB-087	0.972	0.847	14
PCB-095	0.57	0.566	1
PCB-097	0.702	0.42	50
PCB-099	2.5	2.27	10
PCB-101	2.07	1.96	5
PCB-105	0.511	0.648	24

Compound	Concentration (ng/g)		RPD
	C2_91203SDNBBOG18BSB	DUP-C2_91203SDNBBOG18BSB	
PCB-110	0.807	0.692	15
PCB-118	3.03	2.66	13
PCB-128	0.5U	0.848	Not calculable
PCB-138	3.94	4.71	18
PCB-141	0.5U	0.308	Not calculable
PCB-149	1.53	1.55	1
PCB-151	0.514	0.439	16
PCB-153	5.21	5.72	9
PCB-156	0.5U	0.416	Not calculable
PCB-158	0.428	0.455	6
PCB-167	0.5U	0.295	Not calculable
PCB-168+132	0.15	0.5U	Not calculable
PCB-170	0.5U	1.2	Not calculable
PCB-180	1.33	1.73	26
PCB-183	0.5U	0.639	Not calculable
PCB-187	2.2	2.32	5
PCB-203	0.5U	0.445	Not calculable

Compound	Concentration (ng/g)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
PCB-044	0.5U	1.2	Not calculable
PCB-049	3.12	2.93	6
PCB-052	4.05	2.96	31

Compound	Concentration (ng/g)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
PCB-070	0.683	0.807	17
PCB-074	0.612	0.623	2
PCB-087	2.44	2.38	2
PCB-095	5.79	5.11	12
PCB-097	2.9	2.89	0
PCB-099	7.99	7.83	2
PCB-101	8.99	7.46	19
PCB-105	1.79	2.08	15
PCB-110	5.54	6.13	10
PCB-118	9.4	10.1	7
PCB-128	2.68	3.01	12
PCB-138	16.7	21	23
PCB-141	1.12	1.55	32
PCB-149	11.4	12.1	6
PCB-151	3.65	3.62	1
PCB-153	20.8	26.1	23
PCB-156	1.04	1.16	11
PCB-157	0.5U	0.312	Not calculable
PCB-158	1.02	1.07	5
PCB-167	0.939	1.08	14
PCB-168+132	1.87	1.4	29
PCB-170	4.05	5.08	23

Compound	Concentration (ng/g)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
PCB-174	2.16	2.34	8
PCB-177	3.12	2.94	6
PCB-180	5.05	6.48	25
PCB-183	2.38	2.77	15
PCB-187	7.95	9.66	19
PCB-194	0.5U	2.25	Not calculable
PCB-199/200	1.56	2.2	34
PCB-201	0.5U	0.47	Not calculable
PCB-203	1.68	1.61	4
PCB-206	1.72	2.71	45
PCB-209	0.641	0.5U	Not calculable

XI. Internal Standards

Internal standard data were not reviewed for Level II validation.

XII. Compound Quantitation

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIII. Target Compound Identification

Raw data were not reviewed for Level II validation.

XIV. System Performance

Raw data were not reviewed for Level II validation.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to DUP RPD, CRM %R, and results reported below the RL and above the MDL, data were qualified as estimated in fifty-one samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18LPS	PCB-099 PCB-118 PCB-138 PCB-153	J (all detects) J (all detects) J (all detects) J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_91203SDNBBOG18BSB	PCB-049 PCB-087 PCB-097 PCB-158 PCB-180	J (all detects) J (all detects) J (all detects) J (all detects) J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_90208OCNHBOG18BSB	PCB-110 PCB-158	J (all detects) J (all detects)	A	Duplicate sample analysis (RPD) (HD)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC	PCB-206 PCB-209	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	Certified reference material (%R) (LP)
C1_91203SDNBBOG18SAC	PCB-056/060	J (all detects)	A	Certified reference material (%R) (HP)
C1_91203SDNBBOG18BLS C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC	PCB-066	J (all detects)	A	Certified reference material (%R) (HP)

Sample	Compound	Flag	A or P	Reason (Code)
C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	PCB-056/060 PCB-157 PCB-168/132	J (all detects) UJ (all non-detects)	A	Certified reference material (%R) (LP)

Sample	Compound	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45435B3b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/31/19
SDG #: 1807003-021 Level II Page: 1 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 1
2nd Reviewer: MC

METHOD: GC/MS PCB as Congeners (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates /OMP	SW/SW	
IX.	Laboratory control samples /CRM	~~SW~~ A/SW	LCS/D. CRM D=16+50.17+51
X.	Field duplicates		
XI.	Internal standards	N	
XII.	Compound quantitation RL/LOQ/LODs	N	
XIII.	Target compound identification	N	
XIV.	System performance	N	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
2	C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
3	C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
4	C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
5	C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
6	C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
7	C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
8	C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
9	C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
10	C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
11	C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
12	C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
13	C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19

LDC #: 45435B3b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/24/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: A
2nd Reviewer: SVC

METHOD: GC/MS PCB as Congeners (EPA SW 846 Method 8270D)

14	C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
15	C1_91203SDNBBOG18BSB D1	62371	Tissue	03/06/19
16	C2_91203SDNBBOG18BSB D2	62372	Tissue	03/06/19
17	C1_91203SDNBBOG18NAC D3	62373	Tissue	03/06/19
18	C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
19	C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
20	C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
21	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
22	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
23	C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
24	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
25	C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
26	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
27	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
28	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
29	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
30	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
31	C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
32	C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
33	C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
34	C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
35	C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
36	C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
37	C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
38	C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
39	C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
40	C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
41	C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
42	C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
43	C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
44	C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
45	C1_9011DANABOG18BLS	62401	Tissue	03/06/19
46	C1_9011DANABOG18BSB	62402	Tissue	03/06/19
47	C1_9011DANABOG18SHS	62403	Tissue	03/06/19
48	C1_9011DANABOG18SSB	62404	Tissue	03/06/19

LDC #: 45435B3b **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/19
SDG #: 1807003-021 Level II Page: 3 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: CF
2nd Reviewer: SW

METHOD: GC/MS PCB as Congeners (EPA SW 846 Method 8270D)

49	C1_9011DANABOG18WHS	62405	Tissue	03/06/19
50	DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
51	DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
52	C1_91212SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
53	C1_91212SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
54	C1_91212SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
55	C1_91203SDNBBOG18BSBMS	62371MS	Tissue	03/06/19
56	C1_91203SDNBBOG18BSBMSD	62371MSD	Tissue	03/06/19
57	C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
58	C1_90208OCNHBOG18BSBMS	62390MS	Tissue	03/06/19
60	C1_90208OCNHBOG18BSBMSD	62390MSD	Tissue	03/06/19
61	C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19
62				
63				
64				

Notes:

	0-21064						
	0-21066						
	0-21068						

LDC #: ~~45435B36~~

VALIDATION FINDINGS WORKSHEET
Matrix Spike/Matrix Spike Duplicates

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were a matrix spike (MS) and matrix spike duplicate (MSD) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD. Soil / Water.

Y N N/A Was a MS/MSD analyzed every 20 samples of each matrix?

Y N N/A Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	MS/MSD ID	Compound	MS %R (Limits)	MSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
	52/53	PCB119	( )	( )	30 (≤25)	11 (ND)	~~J (det) A~~ (HD)
			( )	( )	( )		
	54	PCB099	( )	( )	28 (≤25)	11 (dets)	~~J (det) A~~ (HD)
		118	( )	( )	37 ( )		
		138	( )	( )	49 ( )		
		153	( )	( )	32 ( )		
			( )	( )	( )		
	~~55/56~~ 5T	PCB049	( )	( )	40 (≤25)	15 (dets)	~~J (det) A~~ (HD)
		08T	( )	( )	38 ( )		
		09T	( )	( )	39 ( )		
		158	( )	( )	42 ( )		
		180	( )	( )	40 ( )		
			( )	( )	( )		
	61	PCB110	( )	( )	33 (≤25)	3 (dets)	~~J (det) A~~ (HD)
		158	( )	( )	51 ( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		
			( )	( )	( )		

LDC #: ~~43435B36~~

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: CA
2nd Reviewer: JM

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		62754-CRM1	PCB018	33 19 (50-150)	( )	( )	1-13 (ND)	~~dets/A~~ (HP)
			059/060	181 ( )	( )	( )	~~dets=4~~	↓
			206	45 ( )	( )	( )		~~dets/A~~ (RP)
			↓ 209	49 (↓)	( )	( )		↓
				( )	( )	( )		
		62755-CRM1	PCB059/060	175 (50-150)	( )	( )	14-32 (dets=4)	~~dets/A~~ (HP)
			↓ 066	153 (↓)	( )	( )	(dets=4, 18-19, 21, 27-29)	↓
				( )	( )	( )		
				( )	( )	( )		
		62756-CRM1	PCB018	152 94 (50-150)	( )	( )	33-51 (ND)	~~dets/A~~ (HP)
			059/060	35 ( )	( )	( )	(dets+ND)	~~dets/A~~ (RP)
			157	45 ( )	( )	( )		
			↓ 168/132	33 (↓)	( )	( )		↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC #: 45435B3b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer:
2nd reviewer: JVC

METHOD: GC/MS PCB (EPA SW 846 Method 8270D)

Compound	Concentration (ng/g)		RPD
	16	50	
PCB049	0.661	0.608	8
PCB052	0.791	0.591	29
PCB066	0.5U	0.756	NC
PCB074	0.5U	0.289	NC
PCB087	0.972	0.847	14
PCB095	0.57	0.566	1
PCB097	0.702	0.42	50
PCB099	2.5	2.27	10
PCB101	2.07	1.96	5
PCB105	0.511	0.648	24
PCB110	0.807	0.692	15
PCB118	3.03	2.66	13
PCB128	0.5U	0.848	NC
PCB138	3.94	4.71	18
PCB141	0.5U	0.308	NC
PCB149	1.53	1.55	1
PCB151	0.514	0.439	16
PCB153	5.21	5.72	9
PCB156	0.5U	0.416	NC
PCB158	0.428	0.455	6
PCB167	0.5U	0.295	NC
PCB168+132	0.15	0.5U	NC
PCB170	0.5U	1.2	NC
PCB180	1.33	1.73	26
PCB183	0.5U	0.639	NC
PCB187	2.2	2.32	5
PCB203	0.5U	0.445	NC

Compound	Concentration (ng/g)		RPD
	17	51	
PCB044	0.5U	1.2	NC
PCB049	3.12	2.93	6
PCB052	4.05	2.96	31
PCB070	0.683	0.807	17
PCB074	0.612	0.623	2
PCB087	2.44	2.38	2
PCB095	5.79	5.11	12
PCB097	2.9	2.89	0
PCB099	7.99	7.83	2
PCB101	8.99	7.46	19
PCB105	1.79	2.08	15
PCB110	5.54	6.13	10
PCB118	9.4	10.1	7
PCB128	2.68	3.01	12
PCB138	16.7	21	23
PCB141	1.12	1.55	32
PCB149	11.4	12.1	6
PCB151	3.65	3.62	1
PCB153	20.8	26.1	23
PCB156	1.04	1.16	11
PCB157	0.5U	0.312	NC
PCB158	1.02	1.07	5
PCB167	0.939	1.08	14
PCB168+132	1.87	1.4	29
PCB170	4.05	5.08	23
PCB174	2.16	2.34	8
PCB177	3.12	2.94	6
PCB180	5.05	6.48	25
PCB183	2.38	2.77	15
PCB187	7.95	9.66	19
PCB194	0.5U	2.25	NC
PCB199/200	1.56	2.2	34
PCB201	0.5U	0.47	NC
PCB203	1.68	1.61	4
PCB206	1.72	2.71	45
PCB209	0.641	0.5U	NC

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 25, 2019

Parameters: Metals

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
C1_9011DANABOG18BLS	62401	Tissue	03/06/19
C1_9011DANABOG18BSB	62402	Tissue	03/06/19
C1_9011DANABOG18SHS	62403	Tissue	03/06/19
C1_9011DANABOG18SSB	62404	Tissue	03/06/19
C1_9011DANABOG18WHS	62405	Tissue	03/06/19
DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
C1_91202SDSBBOG18BKCMS	62357MS	Tissue	03/06/19
C1_91202SDSBBOG18BKCMSD	62357MSD	Tissue	03/06/19
C1_91202SDSBBOG18BKCDUP	62357DUP	Tissue	03/06/19
C1_91202SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
C1_91202SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
C1_91202SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
C1_91203SDNBBOG18QEFMS	62377MS	Tissue	03/06/19
C1_91203SDNBBOG18QEFMSD	62377MSD	Tissue	03/06/19
C1_91203SDNBBOG18QEFDUP	62377DUP	Tissue	03/06/19
C1_90606MISSBOG18YFCMS	62387MS	Tissue	03/06/19
C1_90606MISSBOG18YFCMSD	62387MSD	Tissue	03/06/19
C1_90606MISSBOG18YFCDUP	62387DUP	Tissue	03/06/19
C1_90208OCNHBOG18SSBMS	62397MS	Tissue	03/06/19
C1_90208OCNHBOG18SSBMSD	62397MSD	Tissue	03/06/19
C1_90208OCNHBOG18SSBDUP	62397DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Selenium by Environmental Protection Agency (EPA) SW 846 Method 6020
Mercury by EPA Method 245.7

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

ICP-MS tune data were not reviewed for Level II validation.

III. Instrument Calibration

Instrument calibration data were not reviewed for Level II validation.

IV. ICP Interference Check Sample Analysis

Interference check sample (ICS) analysis data were not reviewed for Level II validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. For C1_91202SDSBBOG18LPSMS/MSD, no data were qualified for mercury percent recoveries (%R) outside the QC limits since the parent sample results were greater than 4X the spike concentration. Relative percent differences (RPD) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Serial Dilution

Serial dilution was not performed for this SDG.

X. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits.

XI. Field Duplicates

Samples C2_91203SDNBBOG18BSB and DUP-C2_91203SDNBBOG18BSB and samples C1_91203SDNBBOG18NAC and DUP-C1_91203SDNBBOG18NAC were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (mg/Kg)		RPD
	C2_91203SDNBBOG18BSB	DUP-C2_91203SDNBBOG18BSB	
Mercury	0.443	0.451	2
Selenium	1.39	1.61	15

Analyte	Concentration (mg/Kg)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
Mercury	0.0798	0.0686	15
Selenium	1.31	1.08	19

XII. Internal Standards (ICP-MS)

Internal standard data were not reviewed for Level II validation.

XIII. Sample Result Verification

All analytes reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Analyte reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to results reported below the RL and above the MDL, data were qualified as estimated in fifty-one samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Metals - Data Qualification Summary - SDG 1807003-021

Sample	Analyte	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	Analyte reported below the RL and above the MDL	J (all detects)	A	Sample result verification (DL)

2018 Regional Harbor Monitoring Program
Metals - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Metals - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45435B4a

SDG #: 1807003-021

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/23/19

Page: 1 of 3

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Metals 6020A/EPA Method 245.1)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	ICP/MS Tune	N	
III.	Instrument Calibration	N	
IV.	ICP Interference Check Sample (ICS) Analysis	N	
V.	Laboratory Blanks	A	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	SW	55/56: Hg 74%
VIII.	Duplicate sample analysis	A	
IX.	Serial Dilution	N	
X.	Laboratory control samples	A	LCS/D CRM
XI.	Field Duplicates	SW	RD = SD + 16.5 LT
XII.	Internal Standard (ICP-MS)	N	
XIII.	Sample Result Verification	N	
XIV.	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
2	C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
3	C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
4	C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
5	C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
6	C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
7	C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
8	C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
9	C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
10	C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
11	C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
12	C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
13	C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
14	C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
15	C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19

LDC #: 45435B4a **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: CF
2nd Reviewer: CF

METHOD: Metals (EPA SW 846 Metals 6020A/EPA Method 245.1)

16	C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
17	C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
18	C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
19	C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
20	C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
21	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
22	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
23	C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
24	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
25	C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
26	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
27	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
28	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
29	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
30	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
31	C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
32	C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
33	C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
34	C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
35	C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
36	C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
37	C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
38	C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
39	C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
40	C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
41	C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
42	C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
43	C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
44	C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
45	C1_9011DANABOG18BLS	62401	Tissue	03/06/19
46	C1_9011DANABOG18BSB	62402	Tissue	03/06/19
47	C1_9011DANABOG18SHS	62403	Tissue	03/06/19
48	C1_9011DANABOG18SSB	62404	Tissue	03/06/19
49	C1_9011DANABOG18WHS	62405	Tissue	03/06/19
50	DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19

LDC #: 45435B4a

SDG #: 1807003-021

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level II

Date: 7/23/19

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Metals 6020A/EPA Method 245.1)

51	DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
52	C1_91202SDSBBOG18BKCMS	62357MS	Tissue	03/06/19
53	C1_91202SDSBBOG18BKCMSD	62357MSD	Tissue	03/06/19
54	C1_91202SDSBBOG18BKCDUP	62357DUP	Tissue	03/06/19
55	C1_91212SDSBBOG18LPSMS	62367MS	Tissue	03/06/19
56	C1_91212SDSBBOG18LPSMSD	62367MSD	Tissue	03/06/19
57	C1_91212SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
58	C1_91203SDNBBOG18QEFMS	62377MS	Tissue	03/06/19
60	C1_91203SDNBBOG18QEFMSD	62377MSD	Tissue	03/06/19
61	C1_91203SDNBBOG18QEFDUP	62377DUP	Tissue	03/06/19
62	C1_90606MISSBOG18YFCMS	62387MS	Tissue	03/06/19
63	C1_90606MISSBOG18YFCMSD	62387MSD	Tissue	03/06/19
64	C1_90606MISSBOG18YFCDUP	62387DUP	Tissue	03/06/19
65	C1_90208OCNHBOG18SSBMS	62397MS	Tissue	03/06/19
66	C1_90208OCNHBOG18SSBMSD	62397MSD	Tissue	03/06/19
67	C1_90208OCNHBOG18SSBDUP	62397DUP	Tissue	03/06/19
68				
69				
70				

Notes:

LDC #: 45435B4a

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Reviewer: CR
2nd reviewer: [signature]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-51		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
QC: 52-67		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
Analysis Method		
ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___

(Circled: Hg and Se for samples 1-51 and QC: 52-67.)

Comments: Mercury by CVAA if performed

LDC#: 45435B4a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA Method 6010B/7000)

Analyte	Concentration (mg/Kg)		RPD
	16	50	
Mercury	0.443	0.451	2
Selenium	1.39	1.61	15

Analyte	Concentration (mg/Kg)		RPD
	17	51	
Mercury	0.0798	0.0686	15
Selenium	1.31	1.08	19

V:\FIELD DUPLICATES\Field Duplicates\FD_inorganic\2019\45435B4a.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: July 25, 2019

Parameters: Wet Chemistry

Validation Level: Level II

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19
C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
C1_9011DANABOG18BLS	62401	Tissue	03/06/19
C1_9011DANABOG18BSB	62402	Tissue	03/06/19
C1_9011DANABOG18SHS	62403	Tissue	03/06/19
C1_9011DANABOG18SSB	62404	Tissue	03/06/19
C1_9011DANABOG18WHS	62405	Tissue	03/06/19
DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19
C1_91202SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (August 2013) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Percent Solids by Standard Method 2540B
Percent Lipids by Gravimetric

All sample results were subjected to Level II data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. Initial Calibration

Initial calibration data were not reviewed for Level II validation.

III. Continuing Calibration

Continuing calibration data were not reviewed for Level II validation.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) analyses were not required by the methods.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VIII. Certified Reference Materials

Certified reference materials (CRM) were analyzed as required by the methods. The results were within QC limits.

IX. Field Duplicates

Samples C2_91203SDNBBOG18BSB and DUP-C2_91203SDNBBOG18BSB and samples C1_91203SDNBBOG18NAC and DUP-C1_91203SDNBBOG18NAC were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (%)		RPD
	C2_91203SDNBBOG18BSB	DUP-C2_91203SDNBBOG18BSB	
Percent solids	21.3	21.3	0
Percent lipids	0.382	0.44	14

Analyte	Concentration (%)		RPD
	C1_91203SDNBBOG18NAC	DUP-C1_91203SDNBBOG18NAC	
Percent solids	23.9	23.4	2
Percent lipids	2.86	2.81	2

X. Sample Result Verification

All analytes reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Analyte reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to results reported below the RL and above the MDL, data were qualified as estimated in fifty-one samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Wet Chemistry - Data Qualification Summary - SDG 1807003-021

Sample	Analyte	Flag	A or P	Reason (Code)
C1_91202SDSBBOG18BKC C1_91202SDSBBOG18RSR C2_91202SDSBBOG18RSR C1_91202SDSBBOG18YFC C1_91202SDSBBOG18NAC C2_91202SDSBBOG18NAC C1_91202SDSBBOG18PCM C1_91202SDSBBOG18SAC C2_91202SDSBBOG18SAC C3_91202SDSBBOG18SAC C1_91202SDSBBOG18LPS C1_91203SDNBBOG18LPS C1_91203SDNBBOG18BKC C1_91203SDNBBOG18BLS C1_91203SDNBBOG18BSB C2_91203SDNBBOG18BSB C1_91203SDNBBOG18NAC C2_91203SDNBBOG18NAC C1_91203SDNBBOG18RSR C2_91203SDNBBOG18RSR C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C3_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C1_90606MISSBOG18SSB C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS C1_90606MISSBOG18YFC C2_90606MISSBOG18YFC C3_90606MISSBOG18YFC C1_90208OCNHBOG18BSB C2_90208OCNHBOG18BSB C3_90208OCNHBOG18BSB C2_90208OCNHBOG18SFC C3_90208OCNHBOG18SFC C1_90208OCNHBOG18SHS C1_90208OCNHBOG18CAH C1_90208OCNHBOG18SSB C2_90208OCNHBOG18SSB C3_90208OCNHBOG18SSB C1_90208OCNHBOG18WHS C1_9011DANABOG18BLS C1_9011DANABOG18BSB C1_9011DANABOG18SHS C1_9011DANABOG18SSB C1_9011DANABOG18WHS DUP-C2_91203SDNBBOG18BSB DUP-C1_91203SDNBBOG18NAC	Analyte reported below the RL and above the MDL	J (all detects)	A	Sample result verification (DL)

2018 Regional Harbor Monitoring Program
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Wet Chemistry - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45435B6 **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/19
SDG #: 1807003-021 Level II Page: 1 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: (Analyte) Percent Solids (SM 2540B), Percent Lipids (Gravimetric)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A 1A	
II	Initial calibration	N	
III.	Calibration verification	N	
IV	Laboratory Blanks	A	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	N	not required
VII.	Duplicate sample analysis	A	
VIII.	Laboratory control samples	A	CRM
IX.	Field duplicates	SW	D=16+50. 1T+5/
X.	Sample result verification	N	
XI	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91202SDSBBOG18BKC	62357	Tissue	03/06/19
2	C1_91202SDSBBOG18RSR	62358	Tissue	03/06/19
3	C2_91202SDSBBOG18RSR	62359	Tissue	03/06/19
4	C1_91202SDSBBOG18YFC	62360	Tissue	03/06/19
5	C1_91202SDSBBOG18NAC	62361	Tissue	03/06/19
6	C2_91202SDSBBOG18NAC	62362	Tissue	03/06/19
7	C1_91202SDSBBOG18PCM	62363	Tissue	03/06/19
8	C1_91202SDSBBOG18SAC	62364	Tissue	03/06/19
9	C2_91202SDSBBOG18SAC	62365	Tissue	03/06/19
10	C3_91202SDSBBOG18SAC	62366	Tissue	03/06/19
11	C1_91202SDSBBOG18LPS	62367	Tissue	03/06/19
12	C1_91203SDNBBOG18LPS	62368	Tissue	03/06/19
13	C1_91203SDNBBOG18BKC	62369	Tissue	03/06/19
14	C1_91203SDNBBOG18BLS	62370	Tissue	03/06/19
15	C1_91203SDNBBOG18BSB	62371	Tissue	03/06/19
16	C2_91203SDNBBOG18BSB	62372	Tissue	03/06/19
17	C1_91203SDNBBOG18NAC	62373	Tissue	03/06/19

LDC #: 45435B6 **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/19
SDG #: 1807003-021 Level II Page: 2 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: (Analyte) Percent Solids (SM 2540B), Percent Lipids (Gravimetric)

18	C2_91203SDNBBOG18NAC	62374	Tissue	03/06/19
19	C1_91203SDNBBOG18RSR	62375	Tissue	03/06/19
20	C2_91203SDNBBOG18RSR	62376	Tissue	03/06/19
21	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
22	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
23	C3_91203SDNBBOG18QEF	62379	Tissue	03/06/19
24	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
25	C1_90606MISSBOG18SSB	62381	Tissue	03/06/19
26	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
27	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
28	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
29	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
30	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
31	C1_90606MISSBOG18YFC	62387	Tissue	03/06/19
32	C2_90606MISSBOG18YFC	62388	Tissue	03/06/19
33	C3_90606MISSBOG18YFC	62389	Tissue	03/06/19
34	C1_90208OCNHBOG18BSB	62390	Tissue	03/06/19
35	C2_90208OCNHBOG18BSB	62391	Tissue	03/06/19
36	C3_90208OCNHBOG18BSB	62392	Tissue	03/06/19
37	C2_90208OCNHBOG18SFC	62393	Tissue	03/06/19
38	C3_90208OCNHBOG18SFC	62394	Tissue	03/06/19
39	C1_90208OCNHBOG18SHS	62395	Tissue	03/06/19
40	C1_90208OCNHBOG18CAH	62396	Tissue	03/06/19
41	C1_90208OCNHBOG18SSB	62397	Tissue	03/06/19
42	C2_90208OCNHBOG18SSB	62398	Tissue	03/06/19
43	C3_90208OCNHBOG18SSB	62399	Tissue	03/06/19
44	C1_90208OCNHBOG18WHS	62400	Tissue	03/06/19
45	C1_9011DANABOG18BLS	62401	Tissue	03/06/19
46	C1_9011DANABOG18BSB	62402	Tissue	03/06/19
47	C1_9011DANABOG18SHS	62403	Tissue	03/06/19
48	C1_9011DANABOG18SSB	62404	Tissue	03/06/19
49	C1_9011DANABOG18WHS	62405	Tissue	03/06/19
50	DUP-C2_91203SDNBBOG18BSB	62406	Tissue	03/06/19
51	DUP-C1_91203SDNBBOG18NAC	62407	Tissue	03/06/19

LDC #: 45435B6 **VALIDATION COMPLETENESS WORKSHEET** Date: 7/23/15
SDG #: 1807003-021 Level II Page: 3 of 3
Laboratory: Physis Environmental Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: (Analyte) Percent Solids (SM 2540B), Percent Lipids (Gravimetric)

52	C1_91212SDSBBOG18LPSDUP	62367DUP	Tissue	03/06/19
53	C1_91203SDNBBOG18BSBDUP	62371DUP	Tissue	03/06/19
54	C1_90208OCNHBOG18BSBDUP	62390DUP	Tissue	03/06/19
55				
56				
57				

Notes:

LDC #: 45435B6

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: Q

All circled methods are applicable to each sample.

Sample ID	Parameter
1-S1	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 TS %Lipids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
Q:S2-S4	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 %Lipids
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC#: 45435B6 **VALIDATION FINDINGS WORKSHEET**
Field Duplicates

Reviewer: G
2nd Reviewer:

Inorganics, Method See Cover

Analyte	Concentration (%)		RPD
	16	50	
Percent solids	21.3	21.3	0
Percent lipids	0.382	0.44	14

Analyte	Concentration (%)		RPD
	17	51	
Percent solids	23.9	23.4	2
Percent lipids	2.86	2.81	2

V:\FIELD DUPLICATES\Field Duplicates\FD_inorganic\2019\45435B6.wpd

Level IV
Data Validation

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Wood Environment & Infrastructure
9210 Sky Park Ct
San Diego, CA 92123
Attn: Ms. Corey Sheredy
corey.sheredy@woodplc.com

September 9, 2019

SUBJECT: 2018 Regional Harbor Monitoring Program, Data Validation

Dear Ms. Sheredy

Enclosed are the final validation reports for the fractions listed below. This SDG was received on August 19, 2019. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #45762:

SDG #	Fraction
1807003-021	Polynuclear Aromatic Hydrocarbons, Polybrominated Diphenyl Ethers, Chlorinated Pesticides, Polychlorinated Biphenyls as Congeners, Metals, Wet Chemistry

The data validation was performed under Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California; June 2018
- USEPA National Functional Guidelines for Organic Superfund Methods Data Review, January 2017
- USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review; January 2017
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; update IV, February 2007; update V, July 2014

Please feel free to contact us if you have any questions.

Sincerely,

Pei Geng
pgeng@lab-data.com
Project Manager/Senior Chemist

Level II/IV - Client Select

LDC #45762 (Wood Environment & Infrastructure Solutions-San Diego, CA / 2019 Regional Harbor Monitoring Program)

LDC	SDG#	DATE REC'D	(3) DATE DUE	PAHs (8270D)		PBDE (8270D -NCI)		Pest. (8270D)		PCB Cong. (8270D)		Se (6020)		Hg (245.7)		% Solids (2540B)		% Lipids (Gravi.)																			
Matrix: Tissue/Water/Sediment				T	S	T	S	T	S	T	S	T	S	T	S	T	S	T	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S	W	S
A	1807003-021	08/19/19	09/09/19	8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0																
Total	J/PG			8	0	8	0	8	0	8	0	8	0	8	0	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64

Shaded cells indicate Level IV validation (all other cells are Level II review). These sample counts do not include DL, RE, MS, MSD, or DUP's.

LDC Report# 45762A2b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: September 6, 2019

Parameters: Polynuclear Aromatic Hydrocarbons

Validation Level: Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (June 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polynuclear Aromatic Hydrocarbons (PAHs) by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at 12 hour intervals.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 with the following exceptions:

Date	Compound	r^2	Associated Samples	Flag	A or P
05/21/19	Indeno(1,2,3-cd)pyrene	0.98961107	All samples in SDG 1807003-021	UJ (all non-detects)	A

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

X. Field Replicates

No field replicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

XIII. Target Compound Identifications

All target compound identifications met validation criteria.

XIV. System Performance

The system performance was acceptable for samples.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to initial calibration r^2 and results reported below the RL and above the MDL, data were qualified as estimated in eight samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Indeno(1,2,3-cd)pyrene	UJ (all non-detects)	A	Initial calibration (r^2) (BC)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polynuclear Aromatic Hydrocarbons - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45762A2b

SDG #: 1807003-021

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9/5/19

Page: 1 of 1

Reviewer:

2nd Reviewer: JM

METHOD: GC/MS Polynuclear Aromatic Hydrocarbons (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/A	RSD ≤ 20%. r^2 ICV ≤ 30%
IV.	Continuing calibration	A	CCV ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates	A/A	
IX.	Laboratory control samples	A	LCS/D
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
2	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
3	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
4	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
5	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
6	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
7	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
8	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
9				

Notes:

LDC #: 45762A36

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: 9
2nd Reviewer: JV6

Method: Semivolatiles (EPA SW 846 Method 8270D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓	✓		
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?	✓			
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the blanks validation findings worksheet.		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10%, was a reanalysis performed to confirm %R ?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

Validation Area	Yes	No	NA	Findings/Comments
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?			✓	
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 45762A-6

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: [illegible]
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A — Did the laboratory conduct an acceptable 5 point calibration prior to sample analysis?
Y N N/A — Were all percent relative standard deviations (%RSD) ≤ 15 and relative response factors (RRF) within method criteria?
Y N N/A — Was a curve fit used for evaluation?
Y N N/A — Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤15.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	5/1/19	ICAL	NN	r^2=0.989611		All (ND)	J/UJ/A (BC)

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/21/2019	Acenaphthene	1	0.0125	0.0091873
		2	0.0250	0.0171304
		3	0.0500	0.0365630
		4	0.1250	0.0878511
		5	0.2500	0.1860251
		6	0.5000	0.3733101

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*0.74384223*	0.743842
Correlation Coefficient	*0.999916*	0.99969
Coefficient of Determination (r^2)	*0.999832*	

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/21/2019	Benzo(a)pyrene	1	0.0125	0.0121376
		2	0.0250	0.0243333
		3	0.0500	0.0529709
		4	0.1250	0.1422354
		5	0.2500	0.3064937
		6	0.5000	0.6517579

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*1.27846230*	1.278462
Correlation Coefficient	*0.999234*	0.99729
Coefficient of Determination (r^2)	*0.998469*	

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/21/2019	Benzo(g,h,i)perylene	1	0.0125	0.0129961
		2	0.0250	0.0272049
		3	0.0500	0.0568785
		4	0.1250	0.1496129
		5	0.2500	0.3270334
		6	0.5000	0.6925887

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*1.35918019*	1.359180
Correlation Coefficient	*0.999243*	0.99732
Coefficient of Determination (r^2)	*0.998487*	

LDC #: 45762A3V

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Reviewer:
2nd Reviewer: JMC

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	5/23/19	~~Phenol~~ (1st internal standard) 44	500	482.74	482.74	3	3
			~~Naphthalene~~ (2nd internal standard) 111	V	512.97	512.97	3	3
			~~Fluorene~~ (3rd internal standard) 442		510.60	510.50	2	2
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45762A-b

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: Q
2nd reviewer: DV

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ d10-EE	1000.00	1024.8944	102	102	
2-Fluorobiphenyl d10-UU		1089.9281	109	109	
Terphenyl-d14 d12-DDD		1113.2592	111	111	
Phenol-d5 d12-222		1138.8945	114	114	
2-Fluorophenol d8-S		721.2812	72	72	
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichloro~~benzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 45762A36

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: Q
2nd Reviewer: JV6

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA) Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 62346-BS1/-BS2

Compound	Spike Added (NG/G)		Spike Concentration (NG/G)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene	500	500	434	446	87	87	89	89	2	3
Pentachlorophenol										
Pyrene	500	500	488	518	98	98	104	104	6	6

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45762A2b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: Q
2nd reviewer: JVG

METHOD: GC/MS SVOA (EPA SW 846 Method 8270D)

(Y) N N/A Were all reported results recalculated and verified for all level IV samples?
(Y) N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

$$\text{Concentration} = \frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. All, ND: 62346-BS1, EG

Conc. = (851705)(2000)(2 /)( ) / (5272766)(0.743842)( )( )

= 434.1 ng/g

#	Sample ID	Compound	Reported Concentration (ng/g)	Calculated Concentration ( )	Qualification
	62346-BS1	EG	434		

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: September 6, 2019

Parameters: Polybrominated Diphenyl Ethers

Validation Level: Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (June 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polybrominated Diphenyl Ethers by Environmental Protection Agency (EPA) SW 846 Method 8270D-NCI

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A perfluorotributylamine (PFTBA) tune was performed.

All ion abundance requirements were met.

III. Initial Calibration

An initial calibration was performed as required by the method.

For compounds where average relative response factors (RRFs) were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990.

Average relative response factors (RRF) for all compounds were within validation criteria.

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Compound	%D	Associated Samples	Flag	A or P
05/15/19	PBDE-154 PBDE-153 PBDE-138 PBDE-183 PBDE-209	28 37 42 51 32	All samples in SDG 1807003-021	J (all detects) UJ (all non-detects)	A

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits with the following exceptions:

Sample	Surrogate	%R (Limits)	Affected Compound	Flag	A or P
C1_90606MISSBOG18SHS	DFPBDE FTBDE	36 (53-141) 135 (61-132)	All compounds	UJ (all non-detects)	P

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicate Sample Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were not within QC limits. No data were qualified since there were no associated samples in this SDG.

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62346-BS1/BS2 (All samples in SDG 1807003-021)	PBDE-209	43 (70-130)	-	UJ (all non-detects)	P

Relative percent differences (RPD) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	RPD (Limits)	Flag	A or P
62346-BS1/BS2 (All samples in SDG 1807003-021)	PBDE-209	53 (≤25)	NA	-

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID (Associated Samples)	Compound	%R (Limits)	Flag	A or P
62355-CRM1 (All samples in SDG 1807003-021)	PBDE-153	34 (50-150)	UJ (all non-detects)	P

X. Field Replicates

No field replicates were identified in this SDG.

XI. Internal Standards

All internal standard areas and retention times were within QC limits.

XII. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

XIII. Target Compound Identifications

All target compound identifications were within validation criteria.

XIV. System Performance

The system performance was acceptable.

XV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to continuing calibration %D, surrogate %R, LCS/LCSD %R, CRM %R, and results reported below the RL and above the MDL, data were qualified as estimated in eight samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	PBDE-154 PBDE-153 PBDE-138 PBDE-183 PBDE-209	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (LC)
C1_90606MISSBOG18SHS	All compounds	UJ (all non-detects)	P	Surrogates (%R) (LS)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	PBDE-209	UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	PBDE-153	UJ (all non-detects)	P	Certified reference materials (%R) (LP)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polybrominated Diphenyl Ethers - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45762A2c

SDG #: 1807003-021

Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET

Level IV

Date: 9/5/19

Page: 1of 1

Reviewer: 1

2nd Reviewer: OM6

METHOD: GC/MS Polybrominated Diphenyl Ethers (EPA SW 846 Method 8270D-NCI)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	A	PFTBA
III.	Initial calibration/ICV	A	RSD ≤ 20% . r² . No ICV
IV.	Continuing calibration	A/SW	CCV ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	SW	
VIII.	Matrix spike/Matrix spike duplicates/DUP	A/SW	Lab dup RPD met - No assoc spl
IX.	Laboratory control samples/CRM	SW	LCS/D. CRM
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
2	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
3	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
4	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
5	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
6	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
7	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
8	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
9				

Notes:

LDC #: 45760A22

VALIDATION FINDINGS CHECKLIST

Page: 1 of 3
Reviewer: 9
2nd Reviewer: JM

Method: Semivolatiles (EPA SW 846 Method 8270D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the ~~BFTPP~~ DFTPPA performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓			
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?			✓	
Were all percent differences (%D) ≤ 30%?			✓	
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?		✓		
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the blanks validation findings worksheet.		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?		✓		
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?		✓		
If any percent recoveries (%R) was less than 10%, was a reanalysis performed to confirm %R ?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓			

LDC #: 45762A2C

VALIDATION FINDINGS CHECKLIST

Reviewer: Q
2nd Reviewer: NC

Validation Area	Yes	No	NA	Findings/Comments
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?			✓	
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 45762A2c

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Reviewer: 9
2nd Reviewer: SVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?

Y (N) N/A Were percent differences (%D) ≤20 % and relative response factors (RRF) within the method criteria?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤20.0%)	Finding RRF (Limit)	Associated Samples	Qualifications
	5/15/19	CCV	PBDE154	28		All (dets+ND)	J/UJ/A (LC)
			153	37			
			138	45			
			183	51			
			~~190~~	~~52~~ (1)			
			209	32			

LDC #: 27624c

VALIDATION FINDINGS WORKSHEET
Surrogate Recovery

Reviewer: [illegible]
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualification below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A	Were percent recoveries (%R) for surrogates within QC limits?
Y (N) N/A	If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?
Y N (N/A)	If any %R was less than 10 percent, was a reanalysis performed to confirm %R?

#	Date	Sample ID	Surrogate	%R (Limits)	Qualifications
		8	DFPBDE	36 (53-141)	J/UJ/P (Nd) (LS)
			FTBDE	135 (61-132)	J/A
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	
				( )	

(NBZ) = Nitrobenzene-d5
(FBP) = 2-Fluorobiphenyl
(TPH) = Terphenyl-d14
(PHL) = Phenol-d5

(2FP)= 2-Fluorophenol
(TBP) = 2,4,6-Tribromophenol
(2CP) = 2-Chlorophenol-d4
(DCB) = 1,2-Dichlorobenzene-d4

LDC #45762A-2c

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?
Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		62346-BS1/-BS2	PBDE209	43 (70-130)	( )	( )	All (ND)	J/UJ/A (LL)
			↓	( )	( )	53 (≤25)		J/UJ/A (HD)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
		62355-BS1	PBDE153	34 (50-150)	( )	( )	All (ND)	J/UJ/A (LL)
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC: 45762A2C

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewwe: 6
2nd Reviewer: JVB

Method: GC/MS (EPA SW 846 Method 8270D-NCI)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/14/2019	PBDE100	1	0.010	0.006025
		2	0.025	0.0146557
		3	0.050	0.034111
		4	0.075	0.0541338
		5	0.100	0.0666975
		6	0.200	0.1441829

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*0.70855663*	0.709000
Correlation Coefficient	*0.999381*	0.99800
Coefficient of Determination (r^2)	*0.998763*	

LDC #: ~~15784c~~

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: CP
2nd Reviewer: NG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	5/15/19	~~Phenol (1st internal standard)~~ PBDE100	102	86.23	86.23	14	14
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			~~Benzo(a)pyrene (6th internal standard)~~					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 15762Ac

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: Q
2nd reviewer: JVB

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ DFBDE	50	41.56	83	83	
2-Fluorobiphenyl FLBDE	↓	53.77	108	108	
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichlorobenzene-d4~~					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID:

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 43763A3c

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: 9
2nd Reviewer: JVB

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA) Where: SSC = Spike concentration
SA = Spike added

RPD = | LCSC - LCSDC | * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 63763BS1/BS2

Compound	Spike Added (ug/g)		Spike Concentration (ng/g)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
FBDE 100	50	50	44.9	49.9	90	90	100	100	11	11

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45673pc

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: SR

METHOD: GC/MS SVOA (EPA SW 846 Method 8270D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x = Area of the characteristic ion (EICP) for the compound to be measured

A_{is} = Area of the characteristic ion (EICP) for the specific internal standard

I_s = Amount of internal standard added in nanograms (ng)

V_o = Volume or weight of sample extract in milliliters (ml) or grams (g).

V_i = Volume of extract injected in microliters (ul)

V_t = Volume of the concentrated extract in microliters (ul)

Df = Dilution Factor.

%S = Percent solids, applicable to soil and solid matrices only.

2.0 = Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 1, PBDE100

Conc. = $\frac{(25099)(1000)(0.1898)(\quad)(\quad)}{(2949519)(0.7085566)(\quad)}$

= 0.228 ng/g

#	Sample ID	Compound	Reported Concentration (ng/g)	Calculated Concentration ( )	Qualification
	1	PBDE100	0.228		

LDC Report# 45762A3a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: September 6, 2019

Parameters: Chlorinated Pesticides

Validation Level: Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (June 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Chlorinated Pesticides by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at the required frequency.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

For compounds where average calibration factors were utilized, percent relative standard deviations (%RSD) were less than or equal to 20.0%.

In the case where the laboratory used a calibration curve to evaluate the compounds, all coefficients of determination (r^2) were greater than or equal to 0.990 with the following exceptions:

Date	Compound	r^2	Associated Samples	Flag	A or P
05/20/19	Dicofol Perthane Endosulfan sulfate 4,4'-DDT	0.98556096 0.98659268 0.98689324 0.98728130	All samples in SDG 1807003-021	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A

Retention time windows were established as required by the method.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Standard	Compound	%D	Associated Samples	Flag	A or P
05/21/19	ICV	BHC-alpha Heptachlor 4,4'-DDD Endrin ketone Methoxychlor	45 37 53 42 31	All samples in SDG 1807003-021	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds with the following exceptions:

Date	Standard	Compound	%D	Associated Samples	Flag	A or P
05/22/19	CCV	Heptachlor Endrin Perthane 4,4'-DDD Methoxychlor	45 40 24 36 38	All samples in SDG 1807003-021	J (all detects) UJ (all non-detects)	A

Retention times of all compounds in the calibration standards were within the established retention time windows.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) and relative percent differences (RPD) were not within QC limits. No data were qualified since there were no associated samples in this SDG.

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were not within QC limits. No data were qualified since there were no associated samples in this SDG.

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits with the following exceptions:

LCS ID (Associated Samples)	Compound	LCS %R (Limits)	LCSD %R (Limits)	Flag	A or P
62346-BS1/BS2 (All samples in SDG 1807003-021)	Endosulfan I Endosulfan II Endrin aldehyde	60 (70-130) 55 (70-130) 25 (70-130)	60 (70-130) 55 (70-130) 26 (70-130)	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P
62346-BS1/BS2 (All samples in SDG 1807003-021)	Methoxychlor	-	134 (70-130)	NA	-

Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID (Associated Samples)	Compound	%R (Limits)	Flag	A or P
62355-CRM1 (All samples in SDG 1807003-021)	2,4'-DDD 2,4'-DDT alpha-BHC	444 (50-150) 1070 (50-150) 487 (50-150)	NA	-

X. Field Replicates

No field replicates were identified in this SDG.

XI. Compound Quantitation

All compound quantitations met validation criteria.

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

XII. Target Compound Identification

All target compound identifications met validation criteria.

XIII. System Performance

The system performance was acceptable.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to initial calibration r^2, ICV %D, continuing calibration %D, LCS/LCSD %R, and results reported below the RL and above the MDL, data were qualified as estimated in eight samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Dicofol Perthane Endosulfan sulfate 4,4'-DDT	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	A	Initial calibration (r^2) (BC)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	BHC-alpha Heptachlor 4,4'-DDD Endrin ketone Methoxychlor	J (all detects) UJ (all non-detects)	A	Initial calibration verification (%D) (HV)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Heptachlor Endrin Perthane 4,4'-DDD Methoxychlor	J (all detects) UJ (all non-detects)	A	Continuing calibration (%D) (CH)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Endosulfan I Endosulfan II Endrin aldehyde	UJ (all non-detects) UJ (all non-detects) UJ (all non-detects)	P	Laboratory control samples (%R) (LL)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Chlorinated Pesticides - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45762A3a
SDG #: 1807003-021
Laboratory: Physis Environmental Laboratories, Inc.

VALIDATION COMPLETENESS WORKSHEET
Level IV

Date: 9/5/19
Page: 1 of 1
Reviewer: Q
2nd Reviewer: JMP

METHOD: GC/MS Chlorinated Pesticides (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	SW/SW	RSD≤20% . r^2 ICV≤30%
IV.	Continuing calibration	SW	CCV≤30%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	A	
VIII.	Matrix spike/Matrix spike duplicates /DUP	SW/SW	%R out for MS/MSD. RPD out for Lab dup*
IX.	Laboratory control samples	SW	LCS/D . CRM
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
2	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
3	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
4	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
5	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
6	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
7	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
8	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
9				

Notes:

* No assd spl - No eval

LDC #: 45762A32

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: CF
2nd Reviewer: SVG

Method: Semivolatiles (EPA SW 846 Method 8270D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?		✓		
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?		✓		
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the blanks validation findings worksheet.		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?	✓			
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10%, was a reanalysis performed to confirm %R ?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?		✓		

LDC #: 45762A39

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: 9
2nd Reviewer: MG

Validation Area	Yes	No	NA	Findings/Comments
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?			✓	
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?		✓		
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?	✓		✓	
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: Pesticides

A. alpha-HCH	K. Endrin	U. Toxaphene	EE. 2,4'-DDT	OO. oxy-Chlordane
B. beta-HCH	L. Endosulfan II	V. Aroclor-1016	FF. Hexachlorobenzene	PP. cis-Nonachlor
C. delta-HCH	M. 4,4'-DDD	W. Aroclor-1221	GG. Chlordane	QQ. trans-Nonachlor
D. gamma-HCH	N. Endosulfan sulfate	X. Aroclor-1232	HH. Chlordane (Technical)	RR. cis-Chlordane
E. Heptachlor	O. 4,4'-DDT	Y. Aroclor-1242	II. p,p'-DDE	SS. trans-Chlordane
F. Aldrin	P. Methoxychlor	Z. Aroclor-1248	JJ. p,p'-DDD	TT. alpha-Endosulphan
G. Heptachlor epoxide	Q. Endrin ketone	AA. Aroclor-1254	KK. p,p'-DDT	UU. beta-Endosulphan
H. Endosulfan I	R. Endrin aldehyde	BB. Aroclor-1260	LL. o,p'-DDT	VV. Endosulphan Sulphate
I. Dieldrin	S. alpha-Chlordane	CC. 2,4'-DDD	MM. o,p'-DDE	WW. Mirex
J. 4,4'-DDE	T. gamma-Chlordane	DD. 2,4'-DDE	NN. o,p'-DDD	

LDC #: 15762A3a

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Did the laboratory conduct an acceptable 5 point calibration prior to sample analysis?
Y N N/A Were all percent relative standard deviations (%RSD) ≤ 15 and relative response factors (RRF) within method criteria?
Y N N/A Was a curve fit used for evaluation?
Y N N/A Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤15.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	5/6/19	ICAL	Dicofol	r^2=0.98556096		All (ND)	J/UJ/A (BC)
			Perthane	=0.98659268			
			N	=0.98689324			
			O	=0.98728130			

INICAL_DOD.wpd

LDC #: 45760A30

VALIDATION FINDINGS WORKSHEET
Initial Calibration Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was an initial calibration verification standard analyzed after each ICAL for each instrument?

Y (N) N/A Were all %D within the validation criteria of ≤30 %D ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	5/21/19	ICV	BHC-alpha	45	All (ND+dets)	J/UJ/A (HV)
			E	37		
			M	53		
			Q	42		
			P	31		

LDC #: 45724A3a

VALIDATION FINDINGS WORKSHEET
Continuing Calibration

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?

Y (N) N/A Were percent differences (%D) ≤20 % and relative response factors (RRF) within the method criteria?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤20.0%)	Finding RRF (Limit)	Associated Samples	Qualifications
	5/22/19	CCV	E	45		All (dot3+ND)	J/UJ/A (CH)
			K	40			
			Perthane	24			
			M	36			
			P	38			

LDC #: 46763A39

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a LCS required?

Y N N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		62346-BS1/BSD	H	60 (70-130)	60 (70-130)	( )	All (ND)	J (H) P (LL)
			L	55 ( )	55 ( )	( )		
			R	25 ( )	26 ( )	( )		
			P	( )	134 ( )	( )		Lots/P (HL)
				( )	( )	( )		
				( )	( )	( )		
		62355-CRI1	CC	444 (50-150)	( )	( )	All (ND)	Lots/A (HP)
			EE	160 ( )	( )	( )		
			A	487 ( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

LDC: 45762A31

VALIDATION FINDINGS WORKSHEET
Initial Calibration Calculation Verification

Reviewwe:
2nd Reviewer: JV6

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/20/2019	BHC-gamma	1	0.025	0.0047984
		2	0.050	0.0110883
		3	0.100	0.0215015
		4	0.250	0.0448668
		5	0.500	0.1118388
		6	1.000	0.2224636

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*0.22059347*	0.220594
Correlation Coefficient	*0.999130*	0.99685
Coefficient of Determination (r^2)	*0.998260*	

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/20/2019	4,4-DDE	1	0.025	0.0837998
		2	0.050	0.1585856
		3	0.100	0.3313765
		4	0.250	0.9069457
		5	0.500	1.8048025
		6	1.000	3.6275790

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*3.62084194*	3.620841
Correlation Coefficient	*0.999955*	0.99983
Coefficient of Determination (r^2)	*0.999910*	

LDC #: 45762A3A

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	5/22/19	~~Phenol~~ (1st internal standard) D	500	528.04	528.04	5.6	5.6
			~~Naphthalene~~ (2nd internal standard) J	↓	448.51	448.51	10	10
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: ~~45762A39~~

VALIDATION FINDINGS WORKSHEET
Surrogate Results Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: JVG

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) of surrogates were recalculated for the compounds identified below using the following calculation:

% Recovery: SF/SS * 100

Where: SF = Surrogate Found
SS = Surrogate Spiked

Sample ID: 1

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
~~Nitrobenzene-d5~~ PCB030	400.00	379.2278	95	95	
2-Fluorobiphenyl 112		315.0255	79	79	
Terphenyl-d14 198		387.0001	97	97	
Phenol-d5 TCMX		373.9653	93	93	
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
~~1,2-Dichlorobenzene-d4~~					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

Sample ID: _____

	Surrogate Spiked	Surrogate Found	Percent Recovery Reported	Percent Recovery Recalculated	Percent Difference
Nitrobenzene-d5					
2-Fluorobiphenyl					
Terphenyl-d14					
Phenol-d5					
2-Fluorophenol					
2,4,6-Tribromophenol					
2-Chlorophenol-d4					
1,2-Dichlorobenzene-d4					

LDC #: 45703A39

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Reviewer: Q
2nd Reviewer: JV6

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA) Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 62346-BS1/BS2

Compound	Spike Added (ug/g)		Spike Concentration (ug/g)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
D	500	500	491	513	98	98	103	103	5	4
J	1	1	439	433	88	88	87	87	1	1

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45763A3A

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: Q
2nd reviewer: JW

METHOD: GC/MS SVOA (EPA SW 846 Method 8270D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 1, J:

Conc. = $\frac{(226478)(1000)(0.1898)(\quad)}{(1788089)(3.620841)(\quad)}$

= 6.63 ng/g

#	Sample ID	Compound	Reported Concentration (ng/g)	Calculated Concentration ( )	Qualification
	1	J	6.63		

LDC Report# 45762A3b

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: September 6, 2019

Parameters: Polychlorinated Biphenyls as Congeners

Validation Level: Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (June 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Polychlorinated Biphenyls (PCBs) as Congeners by Environmental Protection Agency (EPA) SW 846 Method 8270D

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition and cooler temperatures upon receipt met validation criteria.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

A decafluorotriphenylphosphine (DFTPP) tune was performed at the required frequency.

All ion abundance requirements were met.

III. Initial Calibration and Initial Calibration Verification

An initial calibration was performed as required by the method.

A curve fit, based on the initial calibration, was established for quantitation. The coefficient of determination (r^2) was greater than or equal to 0.990 with the following exceptions:

Date	Compound	r^2	Associated Samples	Flag	A or P
05/20/19	PCB-008 PCB-189	0.9896960 0.9899148	All samples in SDG 1807003-021	UJ (all non-detects) UJ (all non-detects)	A

Average relative response factors (RRF) for all compounds were within validation criteria.

The percent differences (%D) of the initial calibration verification (ICV) standard were less than or equal to 30.0% for all compounds with the following exceptions:

Date	Standard	Compound	%D	Associated Samples	Flag	A or P
05/21/19	ICV	PCB-008 PCB-037 PCB-087 PCB-081 PCB-077 PCB-110 PCB-118	32 32 31 35 35 31 32	All samples in SDG 1807003-021	J (all detects) UJ (all non-detects)	A

IV. Continuing Calibration

Continuing calibration was performed at the required frequencies.

The percent differences (%D) were less than or equal to 20.0% for all compounds.

All of the continuing calibration relative response factors (RRF) were within validation criteria.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Surrogates

Surrogates were not required by the method.

VIII. Matrix Spike/Matrix Spike Duplicates/Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were not within QC limits. No data were qualified since there were no associated samples in this SDG.

IX. Laboratory Control Samples/Certified Reference Materials

Laboratory control samples (LCS) and laboratory control samples duplicates (LCSD) were analyzed as required by the method. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

Certified reference materials (CRM) were analyzed as required by the method. The results were within QC limits with the following exceptions:

CRM ID (Associated Samples)	Compound	%R (Limits)	Flag	A or P
62355-CRM1 (C1_91203SDNBBOG18SAC)	PCB-056/060	175 (50-150)	J (all detects)	A
62355-CRM1 (C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS)	PCB-056/060	175 (50-150)	NA	-

CRM ID (Associated Samples)	Compound	%R (Limits)	Flag	A or P
62355-CRM1 (C1_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC)	PCB-066	175 (50-150)	J (all detects)	A
62355-CRM1 (C2_91203SDNBBOG18QEF C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS)	PCB-066	175 (50-150)	NA	-

X. Field Duplicates

No field duplicates were identified in this SDG.

XI. Compound Quantitation

All compound quantitations were within validation criteria.

All compounds reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Compound reported below the RL and above the MDL	J (all detects)	A

XII. Target Compound Identifications

All target compound identifications were within validation criteria.

XIII. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to initial calibration r^2, ICV %D, CRM %R, and results reported below the RL and above the MDL, data were qualified as estimated in eight samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Data Qualification Summary - SDG 1807003-021

Sample	Compound	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	PCB-008 PCB-189	UJ (all non-detects) UJ (all non-detects)	A	Initial calibration (r^2) (BC)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	PCB-008 PCB-037 PCB-087 PCB-081 PCB-077 PCB-110 PCB-118	J (all detects) UJ (all non-detects)	A	Initial calibration verification (%D) (HV)
C1_91203SDNBBOG18SAC	PCB-056/060	J (all detects)	A	Certified reference material (%R) (HP)
C1_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC	PCB-066	J (all detects)	A	Certified reference material (%R) (HP)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Compound reported below the RL and above the MDL	J (all detects)	A	Compound quantitation (DL)

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Polychlorinated Biphenyls as Congeners - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45762A3b **VALIDATION COMPLETENESS WORKSHEET** Date: 9/5/19
SDG #: 1807003-021 Level IV Page: 1 of 1
Laboratory: Physis Environmental Laboratories, Inc. Reviewer: 9
2nd Reviewer: SVG

METHOD: GC/MS PCB as Congeners (EPA SW 846 Method 8270D)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A	
II.	GC/MS Instrument performance check	A	
III.	Initial calibration/ICV	A/SW	r² . ICV ≤ 30%
IV.	Continuing calibration	A	CCV ≤ 20%
V.	Laboratory Blanks	A	
VI.	Field blanks	N	
VII.	Surrogate spikes	N	
VIII.	Matrix spike/Matrix spike duplicates /DUP	A/SW	Lab dup = RPD out - No assd Sp1
IX.	Laboratory control samples /CRM	A/SW	LCS/D . CRM
X.	Field duplicates	N	
XI.	Internal standards	A	
XII.	Compound quantitation RL/LOQ/LODs	A	
XIII.	Target compound identification	A	
XIV.	System performance	A	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
2	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
3	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
4	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
5	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
6	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
7	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
8	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
9				

Notes:

LDC #: 45762A36

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: [illegible]
2nd Reviewer: JM

Method: Semivolatiles (EPA SW 846 Method 8270D)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
Were all technical holding times met?	✓			
Was cooler temperature criteria met?	✓			
II. GC/MS Instrument performance check				
Were the DFTPP performance results reviewed and found to be within the specified criteria?	✓			
Were all samples analyzed within the 12 hour clock criteria?	✓			
IIIa. Initial calibration				
Did the laboratory perform a 5 point calibration prior to sample analysis?	✓			
Were all percent relative standard deviations (%RSD) ≤ 20% and relative response factors (RRF) within method criteria?			✓	
Was a curve fit used for evaluation? If yes, did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?	✓	✓		
IIIb. Initial Calibration Verification				
Was an initial calibration verification standard analyzed after each initial calibration for each instrument?	✓			
Were all percent differences (%D) ≤ 30%?		✓		
IV. Continuing calibration				
Was a continuing calibration standard analyzed at least once every 12 hours for each instrument?	✓			
Were all percent differences (%D) ≤ 20% and relative response factors (RRF) within method criteria?	✓			
V. Laboratory Blanks				
Was a laboratory blank associated with every sample in this SDG?	✓			
Was a laboratory blank analyzed at least once every 12 hours for each matrix and concentration?	✓			
Was there contamination in the laboratory blanks? If yes, please see the blanks validation findings worksheet.		✓		
VI. Field blanks				
Were field blanks were identified in this SDG?		✓		
Were target compounds detected in the field blanks?			✓	
VII. Surrogate spikes				
Were all surrogate percent recovery (%R) within QC limits?			✓	
If 2 or more base neutral or acid surrogates were outside QC limits, was a reanalysis performed to confirm %R?			✓	
If any percent recoveries (%R) was less than 10%, was a reanalysis performed to confirm %R ?			✓	
VIII. Matrix spike/Matrix spike duplicates				
Were matrix spike (MS) and matrix spike duplicate (MSD) analyzed in this SDG?	✓	✓		

LDC #: 45762A36

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: 9
2nd Reviewer: JV6

Validation Area	Yes	No	NA	Findings/Comments
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?	✓			
IX. Laboratory control samples				
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?	✓			
X. Field duplicates				
Were field duplicate pairs identified in this SDG?		✓		
Were target compounds detected in the field duplicates?			✓	
XI. Internal standards				
Were internal standard area counts within -50% to +100% of the associated calibration standard?	✓			
Were retention times within ± 30 seconds of the associated calibration standard?	✓			
XII. Compound quantitation				
Did the laboratory LOQs/RLs meet the QAPP LOQs/RLs?			✓	
Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the compound?	✓			
Were compound quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XIII. Target compound identification				
Were relative retention times (RRT's) within ± 0.06 RRT units of the standard?	✓			
Did compound spectra meet specified EPA "Functional Guidelines" criteria?	✓			
Were chromatogram peaks verified and accounted for?	✓			
XIV. System performance				
System performance was found to be acceptable.	✓			
XV. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			

VALIDATION FINDINGS WORKSHEET

METHOD: GC/MS SVOA

A. Phenol	T. 4-Chloroaniline	MM. 4-Chlorophenyl-phenyl ether	FFF. Di-n-octylphthalate	YYY. 2,3,5-Trimethylnaphthalene
B. Bis (2-chloroethyl) ether	U. Hexachlorobutadiene	NN. Fluorene	GGG. Benzo(b)fluoranthene	ZZZ. Perylene
C. 2-Chlorophenol	V. 4-Chloro-3-methylphenol	OO. 4-Nitroaniline	HHH. Benzo(k)fluoranthene	AAAA. Dibenzothiophene
D. 1,3-Dichlorobenzene	W. 2-Methylnaphthalene	PP. 4,6-Dinitro-2-methylphenol	III. Benzo(a)pyrene	BBBB. Benzo(a)fluoranthene
E. 1,4-Dichlorobenzene	X. Hexachlorocyclopentadiene	QQ. N-Nitrosodiphenylamine	JJJ. Indeno(1,2,3-cd)pyrene	CCCC. Benzo(b)fluorene
F. 1,2-Dichlorobenzene	Y. 2,4,6-Trichlorophenol	RR. 4-Bromophenyl-phenylether	KKK. Dibenz(a,h)anthracene	DDDD. cis/trans-Decalin
G. 2-Methylphenol	Z. 2,4,5-Trichlorophenol	SS. Hexachlorobenzene	LLL. Benzo(g,h,i)perylene	EEEE. Biphenyl
H. 2,2'-Oxybis(1-chloropropane)	AA. 2-Chloronaphthalene	TT. Pentachlorophenol	MMM. Bis(2-Chloroisopropyl)ether	FFFF. Retene
I. 4-Methylphenol	BB. 2-Nitroaniline	UU. Phenanthrene	NNN. Aniline	GGGG. C30-Hopane
J. N-Nitroso-di-n-propylamine	CC. Dimethylphthalate	VV. Anthracene	OOO. N-Nitrosodimethylamine	HHHH. 1-Methylphenanthrene
K. Hexachloroethane	DD. Acenaphthylene	WW. Carbazole	PPP. Benzoic Acid	IIII. 1,4-Dioxane
L. Nitrobenzene	EE. 2,6-Dinitrotoluene	XX. Di-n-butylphthalate	QQQ. Benzyl alcohol	JJJJ. Acetophenone
M. Isophorone	FF. 3-Nitroaniline	YY. Fluoranthene	RRR. Pyridine	KKKK. Atrazine
N. 2-Nitrophenol	GG. Acenaphthene	ZZ. Pyrene	SSS. Benzidine	LLLL. Benzaldehyde
O. 2,4-Dimethylphenol	HH. 2,4-Dinitrophenol	AAA. Butylbenzylphthalate	TTT. 1-Methylnaphthalene	MMMM. Caprolactam
P. Bis(2-chloroethoxy)methane	II. 4-Nitrophenol	BBB. 3,3'-Dichlorobenzidine	UUU.Benzo(b)thiophene	NNNN.
Q. 2,4-Dichlorophenol	JJ. Dibenzofuran	CCC. Benzo(a)anthracene	VVV.Benzonaphthothiophene	OOOO.
R. 1,2,4-Trichlorobenzene	KK. 2,4-Dinitrotoluene	DDD. Chrysene	WWW.Benzo(e)pyrene	PPPP.
S. Naphthalene	LL. Diethylphthalate	EEE. Bis(2-ethylhexyl)phthalate	XXX. 2,6-Dimethylnaphthalene	QQQQ.

LDC #: 45762A3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Did the laboratory conduct an acceptable 5 point calibration prior to sample analysis?
(Y) N N/A Were all percent relative standard deviations (%RSD) ≤ 15 and relative response factors (RRF) within method criteria?
(Y) N N/A Was a curve fit used for evaluation?
Y (N) N/A Did the initial calibration meet the curve fit acceptance criteria of ≥ 0.990?

#	Date	Standard ID	Compound	Finding %RSD (Limit: ≤15.0%)	Finding RRF (Limit: ≥0.05)	Associated Samples	Qualifications
	5/20/19	ICAL	PCB008	r^2=0.9896960		All (ND)	J/UJ/A (BC)
			189	0.9899148			

LDC #: 45762A3b

VALIDATION FINDINGS WORKSHEET
Initial Calibration Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JVG

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was an initial calibration verification standard analyzed after each ICAL for each instrument?

Y (N) N/A Were all %D within the validation criteria of ≤30 %D ?

#	Date	Standard ID	Compound	Finding %D (Limit: ≤30.0%)	Associated Samples	Qualifications
	5/21/19	ICV	PCB008	32	All (dets + ND)	J/UJ/A (HV)
			037	32		
			087	31		
			081	35		
			077	35		
			110	31		
			118	32		

LDC #: 45762A36

VALIDATION FINDINGS WORKSHEET
Laboratory Control Samples (LCS)

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

(Y) N N/A Was a LCS required?

Y (N) N/A Were the LCS/LCSD percent recoveries (%R) and the relative percent differences (RPD) within the QC limits?

#	Date	LCS/LCSD ID	Compound	LCS %R (Limits)	LCSD %R (Limits)	RPD (Limits)	Associated Samples	Qualifications
		G355-CRM1	PCB056/060	175 (50-150)	( )	( )	All (dets=3.)	J dets/A (HP)
			↓ 066	153 (↓)	( )	( )	(dets=3,1)	↓
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		
				( )	( )	( )		

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/20/2019	PCB 118	1	0.010	0.0091449
		2	0.025	0.0243620
		3	0.050	0.0520078
		4	0.075	0.0726841
		5	0.100	0.0979404
		6	0.200	0.1970962

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*0.98496986*	0.98497
Correlation Coefficient	*0.999913*	0.99957
Coefficient of Determination (r^2)	*0.999826*	

Method: GC/MS (EPA SW 846 Method 8270D)

Calibration Date	Analyte	Standard	(Y) Concentration	(X) Area
5/20/2019	PCB180	1	0.010	0.0290437
		2	0.025	0.0606183
		3	0.050	0.1109361
		4	0.075	0.1819282
		5	0.100	0.2343592
		6	0.200	0.4903893

Linear through the origin

	calculated	***Reported***
Constant	*0.000000*	0.0000
X Coefficient(s)	*2.42159889*	2.421600
Correlation Coefficient	*0.999676*	0.99841
Coefficient of Determination (r^2)	*0.999351*	

LDC #: 15760A36

VALIDATION FINDINGS WORKSHEET
Continuing Calibration Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: SV6

METHOD: GC/MS BNA (EPA SW 846 Method 8270D)

The percent difference (%D) of the initial calibration average Relative Response Factors (RRFs) and the continuing calibration RRFs were recalculated for the compounds identified below using the following calculation:

% Difference = 100 * (ave. RRF - RRF)/ave. RRF
$RRF = (A_x)(C_{is})/(A_{is})(C_x)$

Where: ave. RRF = initial calibration average RRF
RRF = continuing calibration RRF
A_x = Area of compound, A_{is} = Area of associated internal standard
C_x = Concentration of compound, C_{is} = Concentration of internal standard

#	Standard ID	Calibration Date	Compound (Reference Internal Standard)	Average RRF (initial)	Reported RRF (CC)	Recalculated RRF (CC)	Reported %D	Recalculated %D
1	CCV	5/20/19	~~Phenol~~ (1st internal standard) PCB118	100	99.38	99.38	1	0.6
			~~Naphthalene~~ (2nd internal standard) PCB180	100	102.95	102.95	3	2.9
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
2			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					
3			Phenol (1st internal standard)					
			Naphthalene (2nd internal standard)					
			Fluorene (3rd internal standard)					
			Pentachlorophenol (4th internal standard)					
			Bis(2-ethylhexyl)phthalate (5th internal standard)					
			Benzo(a)pyrene (6th internal standard)					

Comments: Refer to Continuing Calibration findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45762A36

VALIDATION FINDINGS WORKSHEET
Laboratory Control Sample/Laboratory Control Sample Duplicates Results Verification

Page: 1 of 1
Reviewer: 9
2nd Reviewer: JV6

METHOD: GC/MS Semivolatiles (EPA SW 846 Method 8270D)

The percent recoveries (%R) and Relative Percent Difference (RPD) of the laboratory control sample and laboratory control sample duplicate were recalculated for the compounds identified below using the following calculation:

% Recovery = 100 * (SC/SA) Where: SSC = Spike concentration
SA = Spike added

RPD = I LCSC - LCSDC I * 2/(LCSC + LCSDC) LCSC = Laboratory control sample concentration LCSDC = Laboratory control sample duplicate concentration

LCS/LCSD samples: 6346-BS1/-BS2

Compound	Spike Added (ng/g)		Spike Concentration (ng/g)		LCS Percent Recovery		LCSD Percent Recovery		LCS/LCSD RPD	
	LCS	LCSD	LCS	LCSD	Reported	Recalc	Reported	Recalc	Reported	Recalculated
Phenol										
N-Nitroso-di-n-propylamine										
4-Chloro-3-methylphenol										
Acenaphthene										
Pentachlorophenol										
Pyrene										
PCB 118	50	50	54.3	55.5	109	109	111	111	2	2
" 180	"	"	51.0	56.1	103	102	112	112	9	9

Comments: Refer to Laboratory Control Sample/Laboratory Control Sample Duplicates findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 45762A5b

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: 9
2nd reviewer: JVG

METHOD: GC/MS SVOA (EPA SW 846 Method 8270D)

Y N N/A Were all reported results recalculated and verified for all level IV samples?
Y N N/A Were all recalculated results for detected target compounds agree within 10.0% of the reported results?

Concentration = $\frac{(A_x)(I_s)(V_t)(DF)(2.0)}{(A_{is})(RRF)(V_o)(V_i)(\%S)}$

A_x	=	Area of the characteristic ion (EICP) for the compound to be measured
A_{is}	=	Area of the characteristic ion (EICP) for the specific internal standard
I_s	=	Amount of internal standard added in nanograms (ng)
V_o	=	Volume or weight of sample extract in milliliters (ml) or grams (g).
V_i	=	Volume of extract injected in microliters (ul)
V_t	=	Volume of the concentrated extract in microliters (ul)
Df	=	Dilution Factor.
%S	=	Percent solids, applicable to soil and solid matrices only.
2.0	=	Factor of 2 to account for GPC cleanup

Example:

Sample I.D. 1, PCB118

Conc. = $\frac{(1330)(1000)(0.189)(\quad)(\quad)}{(850484)(0.9849)(\quad)(\quad)}$

= 3.0166 ng/g

#	Sample ID	Compound	Reported Concentration (ng/g)	Calculated Concentration ( )	Qualification
		PCB118	3.02		

LDC Report# 45762A4a

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: August 30, 2019

Parameters: Metals

Validation Level: Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
C1_91203SDNBBOG18QEFMS	62377MS	Tissue	03/06/19
C1_91203SDNBBOG18QEFMSD	62377MSD	Tissue	03/06/19
C1_91203SDNBBOG18QEFDUP	62377DUP	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (June 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Selenium by Environmental Protection Agency (EPA) SW 846 Method 6020
Mercury by EPA Method 245.7

All sample results were subjected to Level IV evaluation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. ICPMS Tune

The mass calibration was within 0.1 AMU and the percent relative standard deviation (%RSD) was less than or equal to 5%.

III. Instrument Calibration

Initial and continuing calibrations were performed as required by the methods.

The initial calibration verification (ICV) and continuing calibration verification (CCV) standards were within QC limits.

IV. ICP Interference Check Sample Analysis

The frequency of interference check sample (ICS) analysis was not performed for this SDG.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods with the following exceptions:

Sample	Analyte	Finding
All samples in SDG 1807003-021	Selenium Mercury	No closing CCB was analyzed.

No contaminants were found in the laboratory blanks.

VI. Field Blanks

No field blanks were identified in this SDG.

VII. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicate (MSD) sample analysis was performed on an associated project sample. Percent recoveries (%R) were within QC limits. Relative percent differences (RPD) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Serial Dilution

Serial dilution was not performed for this SDG.

X. Certified Reference Materials

Certified reference materials (CRM) were analyzed as required by the methods. The results were within QC limits.

XI. Field Duplicates

No field duplicates were identified in this SDG.

XII. Internal Standards (ICP-MS)

All internal standard percent recoveries (%R) were within QC limits with the following exceptions:

Sample	Internal Standard	%R (Limits)	Affected Analyte	Flag	A or P
C1_91203SDNBBOG18QEF	Scandium-45	140.0 (30-120)	Selenium	J (all detects)	P
C2_91203SDNBBOG18QEF	Scandium-45	150.5 (30-120)	Selenium	J (all detects)	P
C1_91203SDNBBOG18SAC	Scandium-45	148.4 (30-120)	Selenium	J (all detects)	P
C2_90606MISSBOG18SSB	Scandium-45	153.7 (30-120)	Selenium	J (all detects)	P
C3_90606MISSBOG18SSB	Scandium-45	150.9 (30-120)	Selenium	J (all detects)	P
C1_90606MISSBOG18RSR	Scandium-45	152.3 (30-120)	Selenium	J (all detects)	P
C1_90606MISSBOG18SEL	Scandium-45	153.7 (30-120)	Selenium	J (all detects)	P
C1_90606MISSBOG18SHS	Scandium-45	150.8 (30-120)	Selenium	J (all detects)	P

XIII. Sample Result Verification

All sample result verifications were acceptable.

All analytes reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Analyte reported below the RL and above the MDL	J (all detects)	A

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to internal standard %R and results reported below the RL and above the MDL, data were qualified as estimated in eight samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Metals - Data Qualification Summary - SDG 1807003-021

Sample	Analyte	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Selenium	J (all detects)	P	Internal standards (%R) (*XII)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Analyte reported below the RL and above the MDL	J (all detects)	A	Sample result verification (DL)

2018 Regional Harbor Monitoring Program
Metals - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Metals - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45762A4a

VALIDATION COMPLETENESS WORKSHEET

SDG #: 1807003-021

Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Date: 8/30/19

Page: 1 of 1

Reviewer:

2nd Reviewer:

METHOD: Metals (EPA SW 846 Metals 6020/EPA Method 245.7)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A A	
II.	ICP/MS Tune	A	
III.	Instrument Calibration	A	
IV.	ICP Interference Check Sample (ICS) Analysis	N	not performed : Text
V.	Laboratory Blanks	SW	
VI.	Field Blanks	N	
VII.	Matrix Spike/Matrix Spike Duplicates	A	
VIII.	Duplicate sample analysis	A	
IX.	Serial Dilution	N	
X.	Laboratory control samples	A	CRM
XI.	Field Duplicates	N	
XII.	Internal Standard (ICP-MS)	SW	
XIII.	Sample Result Verification	A	
XIV	Overall Assessment of Data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
2	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
3	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
4	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
5	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
6	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
7	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
8	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
9	C1_91203SDNBBOG18QEFMS	62377MS	Tissue	03/06/19
10	C1_91203SDNBBOG18QEFMSD	62377MSD	Tissue	03/06/19
11	C1_91203SDNBBOG18QEFDUP	62377DUP	Tissue	03/06/19
12				

Notes:

LDC #: 45760A4G

VALIDATION FINDINGS CHECKLIST

Reviewer: OK
2nd Reviewer: CT

Method: Metals (EPA SW 846 Method 6010/6020/7000)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. ICP/MS Tune				
Were all isotopes in the tuning solution mass resolution within 0.1 amu?	✓			
Were %RSD of isotopes in the tuning solution ≤5%?	✓			
III. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury) QC limits?	✓			
Were the low standard checks within 70-130%			✓	
Were all initial calibration correlation coefficients within limits as specified by the method?	✓			
IV. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
V. ICP Interference Check Sample				
Were ICP interference check samples performed daily?			✓	
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?			✓	
VI. Matrix spike/Matrix spike duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.	✓			
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL(+/-2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were ≤ 5X the RL.	✓			
VII. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			

Validation Area	Yes	No	NA	Findings/Comments
VIII. Internal Standards (EPA SW 846 Method 6020/EPA 200.8)				
Were all the percent recoveries (%R) within the 30-120% (6020)/60-125% (200.8) of the intensity of the internal standard in the associated initial calibration?		✓		
If the %Rs were outside the criteria, was a reanalysis performed?		✓		
IX. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the MDL (ICP)/>100X the MDL(ICP/MS)?			✓	
Were all percent differences (%Ds) < 10%?			✓	
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.				✓
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and ~~dry~~ weight factors applicable to level IV validation?	✓			
XI. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XIII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: US702A4a

VALIDATION FINDINGS WORKSHEET
Sample Specific Element Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled elements are applicable to each sample.

Sample ID	Matrix	Target Analyte List (TAL)
1-8		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
QC: 9-11		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___

Analysis Method

ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
ICP-MS		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Tl, V, Zn, Mo, B, Sn, Ti, ___ ___

Comments: Mercury by CVAA if performed

LDC #: 45162A4a
SDG #: See cover

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: SR
2nd Reviewer: [illegible]

METHOD: Trace metals (EPA SW 846 Method 6010/7000)

#	Date	Blank ID	Analyte	Finding	Associated Samples	Qualifications
			Hg, Se	no closing CCB	All	Text

Comments: _____

LDC #: 45762A4G

VALIDATION FINDINGS WORKSHEET
Internal Standards (ICP-MS)

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Metals (EPA SW 846 Method 6020)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y (N) N/A Were all internal standard percent recoveries within 30-120% of the intensity of the internal standard in the initial calibration standard ?

Y (N) N/A If the response to either of the above questions is no, ~~were the~~ samples reanalyzed as required ?

#	Date	Internal Standard	Associated Metals	%R (Limits)	Associated Samples	Qualifications
		Sc^{45}	Se	140.0	1	J/UJ/P(Det)
				150.5	2	
				148.4	3	
				153.7	4	
				150.9	5	
				152.3	6	
				153.7	7	
				150.8	8	

INTST.4S6

LDC #: 957624T

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Reviewer: g
2nd Reviewer: g

METHOD: Trace metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found x 100 / True

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (~~ug/L~~ mg/kg)	True (~~ug/L~~ mg/kg)	Recalculated %R	Reported %R	Acceptable (Y/N)
	ICP (Initial calibration)						
ICV	ICP/MS (Initial calibration)	Se	0.102	0.1	102	-	Y
ICV	CVAA (Initial calibration)	Hg(ppb)	1020	1000	102	-	Y
	ICP (Continuing calibration)						
	ICP/MS (Continuing calibration)						
CCV	CVAA (Continuing calibration)	Hg(ppb)	1020	1000	102	-	Y

Comments:

LDC #: 45762A4 (T)

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{Found}{True} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated %R / RPD / %D	Reported %R / RPD / %D	Acceptable (Y/N)
V	ICP interference check						
LCSM	Laboratory control sample	Se	1.92	2.06	93	93	Y
9	Matrix spike	Hg	(SSR-SR) 0.573	0.626	92	92	"
11	Duplicate	Se	0.833	0.836	1	1	↓
V	ICP serial dilution						

Comments: _____

LDC #: 45762A4G

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CL
2nd reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
Y N N/A Are all detection limits below the CRDL?

Detected analyte results for Se were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In.\ Vol.)}$

RD = Raw data concentration
FV = Final volume (ml)
In. Vol. = Initial volume (ml) or weight (G)
Dil = Dilution factor

Recalculation:

1: Rawdata = 0.833 mg/kg

#	Sample ID	Analyte	Reported Concentration (ug/g)	Calculated Concentration (ug/g)	Acceptable (Y/N)
	1	Se	0.833	0.833	Y
	2	↓	0.782	0.782	↓
	3	↓	1.33	1.33	↓
	4	↓	1.19	1.19	↓
	5	Hg	0.199	0.199	↓
	6	↓	0.437	0.437	↓
	7	↓	1.11	1.11	↓
	8	↓	0.0767	0.0767	↓

Note:

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: 2018 Regional Harbor Monitoring Program

LDC Report Date: August 30, 2019

Parameters: Wet Chemistry

Validation Level: Level IV

Laboratory: Physis Environmental Laboratories, Inc.

Sample Delivery Group (SDG): 1807003-021

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
C1_90606MISSBOG18SHS	62386	Tissue	03/06/19

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with Final Quality Assurance Project Plan, Regional Harbor Monitoring Program, San Diego, California (June 2018) and a modified outline of the USEPA National Functional Guidelines (NFG) for Inorganic Superfund Methods Data Review (January 2017). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following methods:

Percent Solids by Standard Method 2540B
Percent Lipids by Gravimetric Method

All sample results were subjected to Level IV data validation, which is comprised of the quality control (QC) summary forms as well as the raw data, to confirm sample quantitation and identification.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The compound or analyte was analyzed for and positively identified by the laboratory; however the reported concentration is estimated due to non-conformances discovered during data validation.

U (Non-detected): The compound or analyte was analyzed for and positively identified by the laboratory; however the compound or analyte should be considered non-detected at the reported concentration due to the presence of contaminants detected in the associated blank(s).

UJ (Non-detected estimated): The compound or analyte was reported as not detected by the laboratory; however the reported quantitation/detection limit is estimated due to non-conformances discovered during data validation.

R (Rejected): The sample results were rejected due to gross non-conformances discovered during data validation. Data qualified as rejected is not usable.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected compound or analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Qualification Code Reference

BC The initial calibration (ICAL) curve did not meet method-specified criteria.
CH High continuing calibration verification (CCV) recovery. Analytical results may be biased high.
DL The analyte concentration was between the method detection limit (MDL) and the reporting limit (RL).
FB The analyte was detected in the sample and its associated field blank and the concentration detected in the sample is less than five times the concentration detected in the blanks.
H Holding time.
HD Potential analytical imprecision.
HL High LCS recovery. Analytical results may be biased high.
HM High MS recovery. Analytical results may be biased high.
HP High certified reference material (CRM) recovery. Analytical results may be biased high.
HV High initial calibration verification (ICV) recovery. Analytical results may be biased high.
LC Low CCV recovery. Analytical result may be biased low.
LL Low LCS recovery. Analytical result may be biased low.
LM Low MS recovery. Analytical result may be biased low.
LP Low CRM recovery. Analytical result may be biased low.
LS Low Surrogate recovery. Analytical results may be biased low.
LV Low ICV recovery. Analytical result may be biased low.
NC Calibration verification standard concentrations were outside the calibration range.
NQ There is lack of QC for this analyte.
RB The analyte was detected in the sample and its associated equipment blank and the concentration detected in the sample is less than five times the concentration detected in the blank.
TD The dissolved metals concentration is significantly higher than the total metal concentration.
*# Unusual problems found with the data. The number following the asterisk (*) will indicate the section in the validation report where a description of the problem can be found.

I. Sample Receipt and Technical Holding Times

All samples were received in good condition.

All technical holding time requirements were met.

II. Initial Calibration

All criteria for the initial calibration of each method were met.

III. Continuing Calibration

Continuing calibration frequency and analysis criteria were met for each method when applicable.

IV. Laboratory Blanks

Laboratory blanks were analyzed as required by the methods. No contaminants were found in the laboratory blanks.

V. Field Blanks

No field blanks were identified in this SDG.

VI. Matrix Spike/Matrix Spike Duplicates

Matrix spike (MS) and matrix spike duplicates (MSD) analyses were not required by the methods.

VII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

VIII. Certified Reference Materials

Certified reference materials (CRM) were analyzed as required by the methods. The results were within QC limits.

IX. Field Duplicates

No field duplicates were identified in this SDG.

X. Sample Result Verification

All analytes reported below the reporting limit (RL) and above the minimum detection limit (MDL) were qualified as follows:

Sample	Finding	Flag	A or P
All samples in SDG 1807003-021	Analyte reported below the RL and above the MDL	J (all detects)	A

Raw data were not reviewed for Level II validation.

XI. Overall Assessment of Data

The analysis was conducted within all specifications of the methods. No results were rejected in this SDG.

Due to results reported below the RL and above the MDL, data were qualified as estimated in eight samples.

The quality control criteria reviewed, other than those discussed above, were met and are considered acceptable.

2018 Regional Harbor Monitoring Program
Wet Chemistry - Data Qualification Summary - SDG 1807003-021

Sample	Analyte	Flag	A or P	Reason (Code)
C1_91203SDNBBOG18QEF C2_91203SDNBBOG18QEF C1_91203SDNBBOG18SAC C2_90606MISSBOG18SSB C3_90606MISSBOG18SSB C1_90606MISSBOG18RSR C1_90606MISSBOG18SEL C1_90606MISSBOG18SHS	Analyte reported below the RL and above the MDL	J (all detects)	A	Sample result verification (DL)

2018 Regional Harbor Monitoring Program
Wet Chemistry - Laboratory Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

2018 Regional Harbor Monitoring Program
Wet Chemistry - Field Blank Data Qualification Summary - SDG 1807003-021

No Sample Data Qualified in this SDG

LDC #: 45762A6 **VALIDATION COMPLETENESS WORKSHEET** Date: 8/30/19
SDG #: 1807003-021 Level IV Page: 1 of 1
Laboratory: Physis Environmental Laboratories, Inc. Reviewer:
2nd Reviewer:

METHOD: (Analyte) Percent Solids (SM 2540B), Percent Lipids (Gravimetric)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A A	
II	Initial calibration	A	
III.	Calibration verification	A	
IV	Laboratory Blanks	A	
V	Field blanks	N	
VI.	Matrix Spike/Matrix Spike Duplicates	N	not required
VII.	Duplicate sample analysis	A	DUP
VIII.	Laboratory control samples	A	OPR
IX.	Field duplicates	N	
X.	Sample result verification	A	
XI	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID	Lab ID	Matrix	Date
1	C1_91203SDNBBOG18QEF	62377	Tissue	03/06/19
2	C2_91203SDNBBOG18QEF	62378	Tissue	03/06/19
3	C1_91203SDNBBOG18SAC	62380	Tissue	03/06/19
4	C2_90606MISSBOG18SSB	62382	Tissue	03/06/19
5	C3_90606MISSBOG18SSB	62383	Tissue	03/06/19
6	C1_90606MISSBOG18RSR	62384	Tissue	03/06/19
7	C1_90606MISSBOG18SEL	62385	Tissue	03/06/19
8	C1_90606MISSBOG18SHS	62386	Tissue	03/06/19
9				
10				
11				
12				
13				
14				
15				

Notes:

LDC #: 45762A6

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: CA
2nd Reviewer: CA

Method: Inorganics (EPA Method See cover)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times				
All technical holding times were met.	✓			
II. Calibration				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial calibration correlation coefficients ≥ 0.995?			✓	
Were all initial and continuing calibration verification %Rs within the 90-110% QC limits?			✓	
Were titrant checks performed as required? (Level IV only)			✓	
Were balance checks performed as required? (Level IV only)	✓			
III. Blanks				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.		✓		
IV. Matrix spike/Matrix spike duplicates and Duplicates				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.			✓	
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of ≤ CRDL(≤ 2X CRDL for soil) was used for samples that were ≤ 5X the CRDL, including when only one of the duplicate sample values were ≤ 5X the CRDL.	✓			
V. Laboratory control samples				
Was an LCS anaylzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% (85-115% for Method 300.0) QC limits?	✓			
VI. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	

LDC #: 45762A6

VALIDATION FINDINGS CHECKLIST

Reviewer: 2nd
2nd Reviewer:

Validation Area	Yes	No	NA	Findings/Comments
VII. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
Were detection limits < RL?	✓			
VIII. Overall assessment of data				
Overall assessment of data was found to be acceptable.	✓			
IX. Field duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
X. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 45762AG

VALIDATION FINDINGS WORKSHEET
Sample Specific Analysis Reference

Page: 1 of 1
Reviewer: CR
2nd reviewer: [illegible]

All circled methods are applicable to each sample.

Sample ID	Parameter
1-8	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4 (%Lipids) (%Solids)
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4
	pH TDS Cl F NO_3 NO_2 SO_4 O-PO_4 Alk CN NH_3 TKN TOC Cr6+ ClO_4

Comments:

LDC #: 45762A6

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Reviewer: [illegible]
2nd Reviewer: [illegible]

METHOD: Inorganics, Method see cover

Percent recoveries (%R) for a laboratory control sample and a matrix spike sample were recalculated using the following formula:

%R = Found / True x 100 Where, Found = concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation, Found = SSR (spiked sample result) - SR (sample result).
True = concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

RPD = |S-D| / (S+D)/2 x 100 Where, S = Original sample concentration
D = Duplicate sample concentration

Sample ID	Type of Analysis	Element	Found / S (units)	True / D (units)	Recalculated %R / RPD	Reported %R / RPD	Acceptable (Y/N)
LCSM	Laboratory control sample	%Lipids	10.4	10.4	100	100	Y
MS	Matrix spike sample		(SSR-SR)				
MSD	Duplicate sample						

Comments: _____

LDC #: 45162AC

VALIDATION FINDINGS WORKSHEET
Sample Calculation Verification

Page: 1 of 1
Reviewer: CL
2nd reviewer: [illegible]

METHOD: Inorganics, Method see cover

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?
Y N N/A Are results within the calibrated range of the instruments?
Y N N/A Are all detection limits below the CRQL?

Compound (analyte) results for %Lipids reported with a positive detect were recalculated and verified using the following equation:

Concentration = $\frac{\text{Dry-Vial}}{\text{wt}}$

Recalculation: $\frac{2.0603g - 2.0356g}{5.269g} \times 100 = 0.4688\%$

#	Sample ID	Analyte	Reported Concentration (%)	Calculated Concentration (%)	Acceptable (Y/N)
	1	%Lipids	0.468	0.469	Y
	2		0.614	0.614	
	3		1.35	1.35	
	4		0.459	0.459	
	5	%Solids	21.4	21.4	
	6		21.2	21.2	
	7		21.3	21.3	
	8		22	22	

Note:

APPENDIX G

INITIAL WILDLIFE RISK-BASED SCREENING LEVELS FOR CONTAMINANTS IN TISSUES OF AQUATIC BIOTA IN THE SAN DIEGO REGION

DRAFT - JUNE 3, 2016 (CTZ)
Initial Wildlife Risk-Based Screening Levels for Contaminants in Tissue of Aquatic Biota - San Diego Bay Bioaccumulation Study

MERCURY

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations as ugHg/kgdiet ww)				
NOAEC - screening (all species)	12.8	4.9	9.2	13.5	25.2
LOAEC - screening (most sensitive)	32.1	12.3	23.0	33.7	62.9
LOAEC - screening (mid-range)	577	221	415	606	1132

DDTs

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations as ugDDT/kgdiet ww)				
NOAEC - screening (most sensitive)	29	11	21	30	57
LOAEC - screening (most sensitive)	87	33	62	91	170

tPCBs

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations) as ugtPCBs/kgdiet ww				
NOAEC - screening (most sensitive)	288	110	207	303	566
LOAEC - screening (mid-range)	4,071	1,556	2,926	4,276	7,987

DRAFT - JUNE 3, 2016 (CTZ)
Initial Wildlife Risk-Based Screening Levels for Contaminants in Tissue of Aquatic Biota - San Diego Bay Bioaccumulation Study

PCB TEQs

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations) as ugTEQ/kgdiet ww				
NOAEC - screening (most sensitive)	0.0035	0.0014	0.0025	0.0037	0.0069
LOAEC - screening (lowest, except most sensitive)	0.1587	0.0607	0.1141	0.1667	0.3113

PBDEs

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations) as ugPBDEs/kgdiet ww				
NOAEC - screening (sensitive)	31	12	22	32	60
LOAEC - screening (sensitive)	308	118	221	323	604

Chlordanes

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations) as ugPBDEs/kgdiet ww				
NOAEC - screening (sensitive)	513	196	369	539	1,006
LOAEC - screening (sensitive)	22,436	8,578	16,129	23,569	44,025

DRAFT - JUNE 3, 2016 (CTZ)
Initial Wildlife Risk-Based Screening Levels for Contaminants in Tissue of Aquatic Biota - San Diego Bay Bioaccumulation Study

LPAHs

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations) as ugLPAHss/kgdiet ww				
NOAEC - screening (one species)	946	362	680	993	1,855
LOAEC - screening (one species)	15,160	5,797	10,899	15,926	29,748

HPAHs

Receptor category	waterfowl	small piscivore	large piscivore	large piscivore	generalist
Feeding guild	bottom inverts	pelagic/surface	pelagic/demersal	Pelagic/demersal/bottom fish	aquatic/terrestrial
Representative	Surf scoter	CA. least tern	Caspian tern	Double-crested cormorant	Western gull
Generic Screening value (type)	Generic Screening value (concentrations) as ugHPAHss/kgdiet ww				
NOAEC - screening (one species)	46	18	33	48	90
LOAEC - screening (one species)	4,583	1,752	3,295	4,815	8,994

DRAFT - JUNE 3, 2016 (CTZ)
Initial Wildlife Risk-Based Screening Levels for Contaminants in Tissue of Aquatic Biota - San Diego Bay Bioaccumulation Study

---

Sources of TRVs for calculating NOAECs and LOAECs

Mercury (NOAEC all spp)	Zhang et al 2013
Mercury (NOAEC less sensitive spp, seabirds)	USFWS 2003
Mercury (LOAEC all spp)	Zhang et al 2013
DDTs (NOAEC most sensitive)	DTSC/HERD 2009
DDTs (LOAEC most sensitive)	EPA 1995
tPCBs (NOAEC most sensitive)	DTSC/HERD 2009
tPCBs (LOAEC mid-range)	DTSC/HERD 2009
PCB-TEQ (NOAEC most sensitive)	Su et al 2014
PCB-TEQ (LOAEC all - excl most sensitive)	Su et al 2014
PBDE (NOAEC most sensitive*)	Fernie et al. 2009
PBDE (LOAEC most sensitive*)	Fernie et al. 2009
Chlordanes (NOAEC sensitive species)**	Stickel et al 1983
Chlordanes (NOAEC sensitive species)**	Stickel et al 1983
LPAHs (NOAEC - Japanese quail)	Klasing 2007
LPAHs (LOAEC - Japanese quail)	Klasing 2007
HPAHs (NOAEC - pigeons)	Hough et al 1993
LPAHs (NOAEC - pigeons)	Hough et al 1993

Fernie, K.J., J.L. Schutt, R.J. Lechter, I.J. Ritchie and D.M. Bird. 2009. Environmentally relevant concentrations of DE-71 and HBCD alter eggshell thickness and reproductive success of American kestrels. Environ. Sci. Technol. 43(6):2124-2130.

U. S. Environmental Protection Agency (USEPA). 1995. Great Lakes water quality initiative criteria documents for the protection of wildlife - DDT, Mercury, 2,3,7,8-TCDD and PCBs. EPA-820-B-95-008. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. 82 pp.

Stickel, L.F., S.N. Wiemeyer, and L.J. Blus. 1973. Pesticide residues in eggs of wild birds: Adjustments for loss of moisture and lipid. Bull. Environ. Contam. Toxicol. 9:193-196.

Table A-1. Fish Tissue Composite Summary Table

Harbor	Species	Composite ID	# of Individuals from BOG	# of Individuals from RHMP	Composite Weight (g)	Composite Total Length Minimum (mm)	Composite Total Length Average (mm)	Composite Total Length Maximum (mm)	Tissue Type	Study Source (BOG/Bight/DOC)	Station ID	BOG Coordinate-Latitude	BOG Coordinate-Longitude	RHMP Coordinate-Trawl Start Latitude	RHMP Coordinate-Trawl Start Longitude	RHMP Coordinate-Trawl End Latitude	RHMP Coordinate-Trawl End Longitude
South SD Bay	Round Stingray	C2_91202SDSBBOG18RSR	0	4	76.7	262	282	304	Fillet	RHMP	B18-10034	NA	NA	32.66512	-117.15005	32.66725	-117.14429
South SD Bay	Slough Anchovy	C1_91202SDSBBOG18SAC	0	61	131	62	69	80	Whole organism	DOC	SDBay-07	NA	NA	32.68225	-117.13720	32.68566	-117.14220
South SD Bay	Slough Anchovy	C2_91202SDSBBOG18SAC	0	58	113	45	67	81	Whole organism	DOC	SDBay-06	NA	NA	32.68444	-117.25500	32.73472	-117.22166
South SD Bay	Slough Anchovy	C3_91202SDSBBOG18SAC	0	30	47.7	56	64	67	Whole organism	RHMP	B18-10034	NA	NA	32.66512	-117.15005	32.66725	-117.14429
South SD Bay	Spotted Sand Bass	C1_91202SDSBBOG18SSB	3	0	229	306	341	403	Fillet	BOG	NA	32.64306	-117.12270	NA	NA	NA	NA
												32.68558	-117.17937				
South SD Bay	Spotted Sand Bass	C2_91202SDSBBOG18SSB	3	0	118	275	301	340	Fillet	BOG	NA	32.62227	-117.12466	NA	NA	NA	NA
												32.64306	-117.12270				
												32.68558	-117.17937				
South SD Bay	Spotted Sand Bass	C3_91202SDSBBOG18SSB	3	0	143	253	292	369	Fillet	BOG	NA	32.64306	-117.12270	NA	NA	NA	NA
												32.68558	-117.17937				
South SD Bay	Yellowfin Croaker	C1_91202SDSBBOG18YFC	1	4	280	240	283	342	Fillet	BOG	NA	32.68558	-117.17937	NA	NA	NA	NA
										DOC	SDBay-07	NA	NA	32.68225	-117.13720	32.68566	-117.14220
										RHMP	B18-10036			32.65835	-117.14522	32.66088	-117.13961
										DOC	SDBay-06			32.68444	-117.25500	32.73472	-117.22166