

Appendix D
Boat Hull Testing Protocol

“Safer Alternatives to Copper Antifouling Paints” Standard Operating Procedures For Field Efforts Associated with Hull Testing

June 1, 2009

I. Background

The Port of San Diego (Port) and the Institute for Research and Technical Assistance (IRTA) were awarded an EPA Pollution Prevention Grant to identify alternatives to copper hull paint. The overall goal of this project is to identify viable alternatives to copper-based hull paint and work collectively to encourage the transition to these paints. The project aims to find replacements for copper hull paints that will minimize environmental impacts from hull coatings to the greatest extent possible while keeping performance at a level equal or greater than that of copper paints and cost equal to or less than copper paints. The selection and determination of viable alternatives will take into consideration the following criteria: 1) the ease of cleaning and/or maintenance, 2) the ability to control fouling, 3) cost effectiveness, and 4) the environmental impacts from the paints.

The two year project is comprised of ten tasks scheduled to occur between January 2008 and December 2010. The primary tasks include testing alternative coatings on panels and on boat hulls. Phase One of the study, the panel testing, was conducted during the summer of 2008 and has been completed. Boat hull testing, or Phase Two, will occur from April 2009 to December 2010.

The purpose of developing this Standard Operating Procedures (SOP) for the field assessment of coatings on boat hulls is to: 1) document the assessment process and measurement tools used, and 2) provide guidance on evaluating and cleaning boat hulls. The development of a field testing SOP is necessary to document the project's procedures and ensure consistency throughout the timeframe of the boat hull testing phase, which will ensure that the end results can be reproduced.

II. Hull Cleaning Overview

A key element of this project is to identify the frequency and effort needed to clean the test coatings. The Port and IRTA (herein referred to as “Project Team”) and designated hull cleaners will assess the coatings on a regular basis. Inspections will be scheduled regularly in order to determine whether the coatings and cleaning procedures are effective in repelling fouling or preventing fouling attachment, how often the coatings require cleaning and the level of effort required for cleaning, and any physical deterioration of the coatings themselves. Understanding these factors will enable the Project Team to compare the effectiveness of alternative coatings (in terms of cleaning and cleaning costs) to commonly used copper paints.

Prior to conducting any hull inspections, the Project Team will identify hull cleaners to perform all hull assessments and cleaning efforts. Hull cleaners must meet key selection criteria in order to participate in the project. Qualified hull cleaners should have minimum of three years experience in the San Diego region, as well as familiarity with the local fouling environment and environmentally friendly Best Management Practices (BMP) cleaning methods. In addition, participating hull cleaners must have prior experience with alternative coatings. Participation in a diver certification program is preferred, but not a requirement of the project as long as the hull cleaner is currently using the accepted BMPs.

Once selected, hull cleaners will be assigned boats on which they will regularly perform all assessments. All inspections and cleaning activities for each boat involved in the study will be performed solely by the designated hull cleaner(s) for the duration of the boat hull testing phase. Working in coordination with the Project Team, the project hull cleaner(s) will assess the degree and type of fouling, the type of hand cleaning tool used, and level of effort required to clean the boats. Any physical deterioration of the coating will be assessed, as the longevity of the coatings is an important factor in determining the viability of a coating.

All hull cleaning will be conducted using hand cleaning methods, unless an enhanced cleaning process is deemed necessary as described in Section III.C of this document. As certain hull hand cleaning tools may be too abrasive for use on certain test coatings, the coating suppliers may designate the hand cleaning tool appropriate for their coating. If fouling cannot be removed using the coating suppliers recommended tools, a consultation with the coating supplier must occur prior to using any additional tools/methods for cleaning. The specific methods that will be used to evaluate the coatings are presented in the sections below.

III. Field Assessment

The methodology described in this section presents guidance for analysis and consistent evaluation of the performance of test coatings. The field assessment will be composed of four principal phases: 1) an underwater pre-cleaning assessment, 2) a hull cleaner and Project Team debriefing; 3) underwater cleaning and a cleaning assessment, and 4) an underwater post-cleaning assessment. The evaluation will include a description of the amount of fouling present and its location on the boat hull, the types of fouling, the level of effort required to clean the hull, and the amount of time required to clean the hull. This information will be noted using project field assessment forms which will be provided by the Port.

The Project Team will coordinate with the hull cleaner and boat owner to develop a three week inspection and cleaning schedule prior to visiting the boats. This will ensure that a Project Team member will always be present during each evaluation and enable the boat owner to know when their boat is required to be available. Each hull cleaner will be assigned a particular set of boats that they will evaluate throughout the project timeframe. The Project Team will be present dockside during every scheduled hull assessment and will collaborate with the hull cleaner in making decisions and participating in the evaluations.

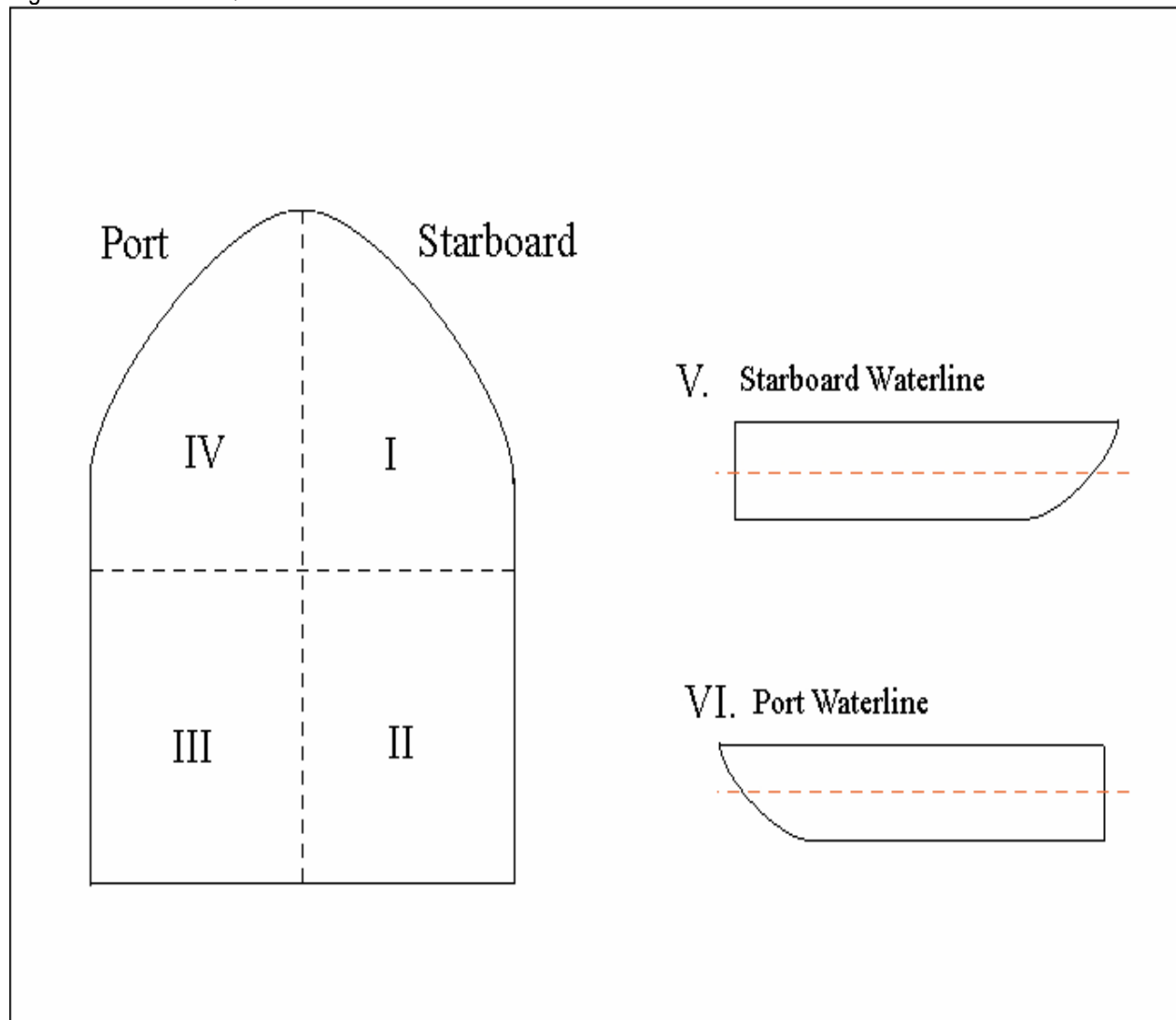
Once on the dock, the Project Team will record general site occupancy information on Test Coating Evaluation Form (Attachment 1). The type and quantity of fouling growth present in the San Diego Bay have been noted to be dependent on environmental factors, such as temperature, sun exposure and shading by the dock. As such, the Project Team will note any variances in temperature and positioning of the boat during each inspection. Date and time will be recorded for all inspections, as well as the team members present. Water temperature readings will be taken alongside each test boat on the day of inspection at a depth of six to twelve inches below the surface of the water and recorded by the Project Team on the form. The Project Team will also identify which side of the boat is adjacent to the dock (port or starboard) and record the compass direction for the bow heading.

A. Underwater Pre-cleaning Assessment

The first step in the inspection process is to conduct an underwater assessment of the fouling growth that has occurred since the last inspection and evaluate the coating condition. This will be completed before any hand cleaning is performed. The fouling evaluation used for this study was developed by the Project Team, in collaboration with the California Professional Divers Association (CPDA) and experts in the field of biofouling. The hull cleaner will perform a pre-cleaning inspection that entails a visual evaluation of the fouling growth present on the boat hull and identification of any coating blemishes or deterioration. During this phase, the hull cleaner must take care to not damage the hull's test coat and primer layer.

The hull cleaner will evaluate the boat hull in six quadrants (Figure 1). This will account for the potential variation in fouling growth due to position or location on the boat hull. The six quadrants are: I - starboard forward, II - starboard aft, III - port aft, IV - port forward, V - starboard waterline, and VI - port waterline. The bottom of the boat will be assessed using the first four quadrants. The last two quadrants will be from the waterline to the first chine below the waterline, from bow to stern, including the transom.

Figure 1 – Boat Hull Quadrants



Fouling Assessment

The hull cleaner will adhere to the following standard methodology when performing the fouling assessment. Numeric ratings will be used to assess fouling growth for each coating. Fouling growth on each boat hull will be evaluated on a 0 – 5 scale, with 0 representing the optimal condition and 5 the worst condition. Table 1 identifies the numeric ratings and provides a description of what type of fouling growth is associated with each rating.

Inspection of the boat hull will begin by assessing fouling growth and assigning a rating for Quadrant I (starboard forward), followed by evaluating Quadrants 2 through 6. The hull cleaner will record the fouling

rating for each quadrant and provide any additional observations or comments, such as noting the type of fouling present, on the hull cleaner field form (Attachment 2).

Table 1 – Fouling Rating Scale

Rating	Fouling Growth
0	No silting, biofilm or fouling growth present.
1	Light silting or biofilm. Little to no discoloration; Paint surface still clearly visible beneath.
2	Heavy biofilm; Light to moderate silting as indicated by discoloration (a solid, discernible, physical layer); Painted surface may be slightly obscured.
3	Low to medium levels of fouling present; Dark algae impregnation; Hard growth may be present (tubeworms, barnacles, bryozoans, etc.); Painted surface definitely obscured.
4	Medium to high levels of fouling present; Hard growth present, such as tubeworms, barnacles, bryozoans, etc.; Macrofoulers may include mature forms that may be densely grouped; Paint surface no longer visible beneath fouling in areas.
5	High levels of fouling present; Lengthy, soft algae and hard, tube worms and possibly barnacles impregnating the coatings; Macrofoulers may be densely grouped; Coral** growth can be seen to extend out from the hull; Paint surface no longer visible beneath fouling.

*0 is best condition; 5 is worst condition; ** Coral is the local term used for limestone tubes of worms that grow on the coating's surface.

Coating Condition:

During each pre-cleaning assessment, the hull cleaner will determine an overall pre-cleaning coating condition rating for the entire hull and will also note any blemishes or scratches on boats surface. The color of undercoat and the test coating was recorded when the coating was applied to the boat hull. This will enable the hull cleaner to identify and evaluate any physical failures to coating surface (scratches, blemishes, etc.) over the study period. Table 2 identifies the rating scale for evaluating the coating condition. Ratings of 1-3 represent antifouling painted surface appearance associated with normal physical wear due to underwater cleaning action or hydrodynamic effects. Ratings 4 and 5 indicate either excessive cleaning actions or blistering due to internal failure of the paint system. Such blisters are not the result of cleaning but may not be noticed until after a cleaning episode.

Inspection of the boat hull will begin by assessing the condition of the coating in Quadrant 1, followed by evaluating Quadrants 2 through 6, in similar fashion to the fouling evaluation. The hull cleaner will record a single coating condition rating for the entire boat on the diver field form and will provide additional observations or comments, such as noting the location or type of damage observed on the boat hull, if any is observed.

Table 2 – Coating Condition Rating Scale

Coating Condition Rating	Coating Description
1	Antifouling paint intact, new or slick finish. May have a mottled pattern of light and dark portions of the original paint color
2	Shine is gone or surface lightly etched. No physical failures
3	Physical failure on up to 20% of boat hull. Coating may be missing from slightly curved or flat areas to expose underlying coating. Coating has visible swirl marks within the outermost layer, not extending into any underlying layers of paint
4	Physical failure of coating on 20-50% of boat bottom. Coating missing from slightly curved or flat areas to expose underlying coating. Coating missing from intact blisters or blisters which have ruptured to expose underlying coating layer(s). Visible swirl marks expose underlying coating layer
5	Physical failure of coating on over 50% of boat bottom. Coating missing from intact blisters or blisters which have ruptured to expose underlying coating layer(s). Visible swirl marks expose underlying coating layer

Photographs and/or video recordings of cleaning or other hull coating related activities are a necessary part of the assessment process. The hull cleaners will take underwater photos before and after cleaning the hull to capture the amount of growth that has occurred and verify that the fouling growth is being removed. The decision to photograph a quadrant will be based on the fouling rating the quadrant receives. At a minimum, photographs will be taken of a quadrant when it is assigned a fouling rating of 3 or higher, or when a particular area shows abnormal fouling effects (diverse fouling community, or an increased amount of fouling compared to the rest of the hull, etc). Particular attention will be paid to those areas which appear to have consistent fouling. If a coating shows physical deterioration, photographs will be taken of the identified areas as well. The photographs taken throughout the boat hull phase will be useful when comparing the test coating performance.

B. Hull Cleaner Project Team Debriefing

Once the pre-cleaning assessment is complete, the hull cleaner will surface to debrief the Project Team member present on the dock. The hull cleaner will release the diver field form to the Project Team member upon surfacing and will describe the fouling growth and coating conditions they observed. The Project Team and the hull cleaner will discuss the extent and type of fouling present in order to determine the extent of cleaning required. The level of cleaning will be categorized into one of three general categories; 1) No cleaning required; 2) Partial cleaning – clean only discrete sections of boat hull – hull cleaner will indicate the quadrants in which cleaning is required; and 3) Full cleaning – removal of fouling from all quadrants of the boat hull.

The decision to clean a hull will be based upon the amount of fouling and type of fouling present. If the fouling rating is 0, no cleaning is required for a quadrant. Additionally, no cleaning is recommended for quadrants assigned a fouling rating of 1. When the fouling rating is 2, the Project Team and hull cleaner will discuss whether cleaning shall be initiated. Quadrants with fouling ratings of 3 through 5 will be processed as discussed in Section C. The boat hull will be deemed to require partial cleaning if only a few discrete sections or quadrants require cleaning. Full cleaning may be prescribed when most quadrants have a fouling rating of 2 or higher. In all cases, the determination on whether to clean will be made by consensus between the Project Team and the hull cleaner.

C. Underwater Cleaning and Cleaning Assessment

To fully assess alternative coatings, it is critical to gain an understanding of what cleaning regime is best for each test coating. The cleaning assessment is intended to provide an indication of the level of effort and the appropriate hand hull cleaning tool required to clean a specific test coating. It is important to understand this, as a critical element for any successful hull coating is proper maintenance. To be most effective, cleaning should occur in a timely manner, minimize coating wear, and not require considerable effort. Another important element is whether the boat hull remains relatively free of fouling until the next scheduled cleaning.

Cleaning tools will consist of the hand tools presented in Table 3, ranging from the least abrasive at the top of the table (carpet) and increasing in abrasiveness. The tools are consistent with the hull cleaning industry standards as specified in the California Professional Divers Association Divers (CPDA) Hull Cleaning Best Management Practices Certification Manual (2008). All cleaning tools will be purchased by the Project Team from hull cleaning supply distributors. For each cleaning, the Project Team will provide the necessary hand tools (all 5 hand tools: carpet, white pad, green pad, purple pad, and brown pad) to the Project hull cleaner. If coating supplier recommends use of an alternative cleaning tool, the specific tool will be provided to the hull cleaner as well. Coating suppliers may also prohibit the use of some of the more abrasive tools for their test coating, as such tools may damage the coating surface. In these instances, the suppliers have clearly discussed the cleaning limitations with the Project Team prior to any cleaning and this limited cleaning tool list will be followed.

Table 3 – Project Hull Cleaning Tools

Tool	Usage
<u>Carpet</u> – Soft medium to long shag	These pads are used to gently remove slime, sediment, light algae and other very soft fouling. Appropriate for newly painted hulls or soft coatings.
<u>White pad</u> (3M # H-08440 or 07445) - Soft	Used to gently remove slime, sediment, light algae and other very soft fouling. Appropriate for newly painted hulls or soft coatings.
<u>Green/Blue Pads</u> (3M #H-8242) - Medium	Used to remove heavy slime, sediment, and moderate algae impregnation, light marine grass growth and other soft fouling. Not suitable for newly painted boats.
<u>Purple Pads</u> (3M #H-07447 or 07448) - Medium	Used to remove heavy slime, sediment, and moderate algae impregnation, light marine grass growth, and other soft fouling. Also used in areas of low levels of hard growth Not suitable for newly painted boats.
<u>Brown Pad</u> (3M #H-08541) - Coarse	Used to remove heavy slime, sediment, and algae impregnation, moderate marine grass growth and other soft fouling. Also used in areas with low to medium levels of hard growth. Not suitable for newly painted boats.

* Obtained from the California Professional Divers Association's Hull Cleaning BMP Certification Manual (2008)

Once cleaning is initiated, the first tool utilized will be either the supplier recommended hand tool or the least abrasive hand tool (Table 3). The hull cleaner will use the selected tool and began cleaning, first using light pressure and gradually increasing pressure and the number of passes until all fouling growth is removed. The hull cleaner will continue moving through all hull quadrants that require cleaning using the selected tool. During the cleaning, the hull cleaner will periodically surface to debrief the Project Team on the progress being made and discuss areas where there is difficulty removing the fouling.

If the first tool is deemed inadequate (i.e., not able to fully remove fouling with hard effort), then the hull cleaner will surface to notify the Project Team. The hull cleaner will then continue the cleaning effort using the prescribed regime stated above with next hand cleaning tool on the list. This progression will continue, increasing the abrasiveness of the tool through the entire Table 3 list, unless limited by the coating supplier's cleaning specifications, until a tool can adequately remove all fouling. For example, if the hull cleaner first attempted the carpet, the next tool used would be the white pad. To maintain the coating's

integrity, the tool selection may be adjusted either less or more abrasive based upon the hardness of the coating and the fouling impregnation. The hand tool finally used to successfully remove the fouling will be assigned a numerical rating (0-5) for the level of effort required to remove the fouling (Table 4). Once the cleaning has been completed, the hull cleaner will document the progression of hand tools used, the cleaning effort rating for the final hand cleaning tool used, and the amount of time it took to clean the hull.

Table 4 - Cleaning Effort Rating Scale

Cleaning Rating	Effort Description
0	None; No cleaning required
1	Light pressure: very easy to remove growth with one wipe
2	Light to medium pressure: still easy to remove growth but may require two or more passes in some areas to remove growth
3	Firm effort: firm scrubbing and multiple passes required to remove fouling growth.
4	Firm scrub, hard effort: With very hard physical effort, firm scrub and continuous passes required to remove fouling growth.
5	Hard scrub, very hard effort: even with hard physical effort, growth presented a challenge to remove

It is acknowledged that maintaining coating integrity is critical for the long-term performance of the coating. Therefore, an effective long-term maintenance program is best achieved by using an appropriate combination of cleaning pressure, tool abrasiveness, and number of cleanings. During the course of the study, there may be instances in which the prescribed cleaning tools may not effectively remove fouling growth. This may occur when there is a significant amount of hard fouling, too much fouling is present, the suppliers' have limited the types of tools to use, or any combination of the above factors exist. When this occurs, the Project Team will consult with the coating supplier to determine the most appropriate course of action or enhanced cleaning options available for that selected test coating. The Project Team will also seek input from the hull cleaner using their experience and best professional judgment as to an appropriate course of action to take. In general, the available options will vary depending on the coating type or make-up (hard, soft, active ingredient or non-biocide). For example, some soft (silicon-based) coatings may not be able to withstand the abrasive pads (green, brown, etc). As such, special considerations for soft coatings or those having an active ingredient may be limited.

The following approach will be used to go beyond the normal cleaning process detailed above. In general an enhanced cleaning process will involve increasing the frequency of cleaning, and when acceptable, using more aggressive cleaning methods, even potentially moving beyond the limits of cleaning tools used in Table 3. In all cases, the Project Team will come to agreement with the supplier on the course of action that will be taken on their test coating, prior to initiating any enhanced cleaning regime. In extreme cases, the Project Team may also consider the use of mechanical brushes if fouling cannot be removed using an increased frequency and abrasive hand tools, as long as the supplier is open to such means. Please note however, that mechanical means will not be permitted on any coating containing an active ingredient. If an alternate cleaning method is deemed effective, the Project Team will continue this effort for the remainder of the study or until it is no longer effective. Finally, if none of these efforts are successful, the Project Team will discuss with the supplier and boater the possibility of repainting or removing the test coating from the study.

In all instances, the Project Team will clearly document on the field sheet all variances in cleaning from this SOP. While these additional efforts may not necessarily equate to a coating's failure, they may be

used to factor in additional costs for labor, maintenance, or the need for a special cleaning strategy. These will be considered in the overall coating performance in the final project report.

D. Underwater Post – Clean Assessment

The post cleaning assessment will reveal if there was any coating deterioration that had been covered by fouling or if cleaning efforts removed any of the coating. Once the cleaning is complete, the hull cleaner will then begin the post – cleaning assessment of the boat hull. In the same order as the pre – cleaning assessment, the hull cleaner will begin with Quadrant I, and progress through the other quadrants. The hull cleaner will note any physical deterioration or scratches on the coating's surface within each quadrant. The hull cleaner will note if there is any physical failure, and will determine a post-cleaning coating condition rating (using the criteria in Table 2) for the entire boat hull. Again, similar to the pre – cleaning assessment, a single coating condition rating will be used for the entire boat hull. The hull cleaner will complete the post – cleaning assessment by taking photographs of the boat hull, paying particular attention to those areas that were previously fouled to indicate that fouling has been successfully removed. The hull cleaner will then surface to debrief the Project Team on their post-cleaning observations.

IV. QUALITY ASSURANCE

Quality assurance is a necessary part of any study to ensure that the study can provide reproducible results and can be replicated by others. Quality Assurance mechanisms ensure that accuracy and precision can be documented throughout a project. The Project Team, hull cleaners, coating suppliers were involved in the development and review of this field SOP. The boat hull testing has incorporated the following quality assurance elements into the boat hull assessment and cleaning to ensure accuracy and consistency during all field efforts.

1. All participants will adhere to the methodologies describe in this document to ensure consistency throughout the project timeframe and maintain accuracy in the results. A copy of this SOP will be taken to every inspection effort. In the event that an unanticipated situation arises, the Project Team will refer to the cleaning strategy outlined herein. If this SOP does not fully address the issue, the Project Team, with consensus of the hull cleaner and coating supplier, will use best professional judgment to determine the most appropriate course of action for the particular boat, test coating and cleaning strategy. Once decided, the Project Team may amend this SOP to best reflect the updated practices.
2. A critical element in the development of this SOP was incorporating a peer review process into the development of the hull assessment protocol document. This ensures that this phase of the project will follow accepted methodologies. The Project Team identified experts in fouling research to serve as reviewers. Comments from the stakeholder workgroup were also incorporated into this SOP.
3. Project hull cleaners will conduct periodic pre-cleaning assessments on the same vessel. Two project hull cleaners will evaluate a single boat hull and confer their observations with the Project Team and each other. This element will ensure consistency among project hull cleaners when providing ratings for fouling, coating condition, and cleaning. This coordinated assessment element will also ensure consistency in initiating cleaning.
4. Project hull cleaners will also be periodically accompanied by a Port designated consultant during the pre-cleaning assessment. This will provide an additional mechanism to verify observed conditions and ensure consistency in the evaluating and assignment of ratings of fouling and coating condition. Other hull cleaners not directly involved in the project may occasionally be invited to attend the pre-cleaning evaluations as well. This may help provide an unbiased opinion on when cleaning should occur and the level of effort needed to satisfactorily clean the hull.

Attachment 1 Test Coating Evaluation Form

Safer Alternatives to Copper Antifouling Paints Study Coating Field Sheet

Date: _____ Coating ID: _____ Original Launch Date: _____
 Time: _____ Vessel Name: _____ Marina/Slip: _____
 Water Temperature: _____ Project Team: _____
 Weather: Sunny P. Cloudy Overcast Fog Water Color: Blue Green Yellow Brown
 Side of boat closest to dock: Port Starboard Bow Orientation: N S E W Degree Heading: _____

Pre-Cleaning Fouling Rating	Notes (Photos taken)
I (Starboard Forward) <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
II (Starboard Aft) <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
III (Port Aft) <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
IV (Port Forward) <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
V (Starboard Waterline) <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
VI (Port Waterline) <input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
<u>Cleaning Tool</u>	
<input type="checkbox"/> N/A <input type="checkbox"/> Supplier Cleaning Tool (_____) <input type="checkbox"/> Carpet <input type="checkbox"/> White <input type="checkbox"/> Green <input type="checkbox"/> Purple <input type="checkbox"/> Brown	
<u>Comments:</u>	

Cleaning Effort	
<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
Comments:	
Coating Condition	Pre-Cleaning: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 Post-Cleaning: <input type="checkbox"/> N/A <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Comments:	
Coating Condition Rating Criteria	Cleaning Effort Rating Criteria
1 Paint intact; new, slick finish	0 None; No cleaning required
2 Shine gone or surface slightly etched; no physical failures	1 Light pressure: very easy to remove growth with one wipe
3 Physical failure up to 20% of hull. Coating may be missing from slightly curved or flat areas to expose underlying coating; Coating has visible swirl marks within outermost layer	2 Light to medium pressure: still easy to remove growth but may require two or more passes in some areas to remove growth
4 Physical failure on 20-50% of hull; Coating missing from slightly curved or flat areas to expose underlying coating; Visible swirl marks expose underlying layer; Coating missing from ruptured blisters	3 Firm effort: firm scrubbing and multiple passes required to remove fouling growth.
5 Physical failure on over 50% of hull; Coating missing from slightly curved or flat areas to expose underlying coating; Visible swirl marks expose underlying layer; Coating missing from ruptured blisters	4 Firm scrub, hard effort: With very hard physical effort, firm scrub and continuous passes required to remove fouling growth.
	5 Hard scrub, very hard effort: even with hard physical effort, growth presented a challenge to remove
Fouling Growth Rating	
0 - None, No biofilm	<u>Additional Notes:</u>
1 - Light bio film or mild silting – looks like dust	
2 - Moderate silting and/or slime layer	
3 - Moderate to heavy silting; Dark algae impregnation; Early stages of hard growth present	
4 - Lengthy soft growth; Hard growth present	
5 - Lengthy soft algae; hard growth (i.e., tube worms and/or barnacles) impregnating the coating. TW growth can be seen to extend out from the hull.	

Attachment 2 Hull Cleaner Field Form

Pre-Cleaning Assessment

Boat Name: _____ **Date:** _____

Marina: _____ **Hull Cleaner:** _____

Fouling Ratings

- 0 = No silt, biofilm or fouling growth present
- 1 = Light silt or biofilm
- 2 = Heavy biofilm; light to moderate silt (discoloration)
- 3 = Low to medium levels of fouling present; hard growth may be present; dark algae impregnation
- 4 = Medium to high levels of fouling; hard growth present
- 5 = High levels of fouling present. Lengthy soft algae and hard fouling present

<p>IV - Fouling Rating:</p> <p>0 1 2 3 4 5</p> <p>Notes (Type of fouling)</p>		<p>I - Fouling Rating:</p> <p>0 1 2 3 4 5</p> <p>Notes (Type of fouling)</p>
<p>III - Fouling Rating:</p> <p>0 1 2 3 4 5</p> <p>Notes (Type of fouling)</p>		<p>II - Fouling Rating:</p> <p>0 1 2 3 4 5</p> <p>Notes (Type of fouling)</p>

V. Starboard Waterline



V - Fouling Rating: **0** **1** **2** **3** **4** **5**

Notes (Type of fouling)

VI. Port Waterline



VI - Fouling Rating: **0** **1** **2** **3** **4** **5**

Notes (Type of fouling)

Overall notes:

Overall Coating Condition Rating:

1	Paint intact; new, slick finish
2	Shine gone or surface slightly etched; no physical failures
3	Physical failure up to 20% of hull. Coating may be missing from slightly curved or flat areas to expose underlying coating; Coating has visible swirl marks within outermost layer
4	Physical failure on 20-50% of hull; Coating missing from slightly curved or flat areas to expose underlying coating; Visible swirl marks expose underlying layer; Coating missing from ruptured blisters
5	Physical failure on over 50% of hull; Coating missing from slightly curved or flat areas to expose underlying coating; Visible swirl marks expose underlying layer; Coating missing from ruptured blisters

Appendix E
Boat Hull Testing Data

Date	Water Temp (C)	Dockside Orientation /Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-Pre-clean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
05/14/2009	20.3	Port/ NW 120	3	Bry (~1% in front and ~10% as move farther back in quadrant)	3	Bry,TW	3	Bry,TW	3	Bry(~1% in front and ~10% as move farther back in quadrant)	3	Bry,TW	3	Bry,TW	Green Pad		2		2	Bottom of keel has minor scratches from sitting on blocks,area of chipping on upper forward rudder post,scratch at keel coating peeled a little.	2
06/03/2009	20.1	Port/ NW 120	1		1	Aft section (keel) on centerline of hull has a moderate amount of fouling, but wipes off with hand	1	1 solitary branched Bry	1		1		1		N/A		0		1		N/A
06/23/2009	20.5	Port/ NW 120	3	Juvenile Tun,Bry,Medium to heavy algal slime growth	3	Juvenile Tun,Bry,Medium to heavy algal slime growth	3	Juvenile Tun,Bry,Medium to heavy algal slime growth	3	Juvenile Tun,Bry,Medium to heavy algal slime growth	3	Juvenile Tun,Bry,Medium to heavy algal slime growth	3	Juvenile Tun,Bry,Medium to heavy algal slime growth	Supplier Recommended	Microfiber took only top layer off,terry cloth towel worked very well	2		1	Starboard side 3' back/1 foot down there is a 8" diamter pink spot,another 10' back 8-10" in diameter	1
07/14/2009	21.7	Port/ NW 120	3	Light to medium algae,algae growth on all areas of hull and keel,juvenile Bry	3	Light to medium algae,algae growth on all areas of hull and keel,juvenile Bry	3	Light to medium algae,algae growth on all areas of hull and keel,juvenile Bry	3	Light to medium algae,algae growth on all areas of hull and keel,juvenile Bry	3	Light to medium algae,algae growth on all areas of hull and keel,juvenile Bry	3	Light to medium algae,algae growth on all areas of hull and keel,juvenile Bry	Terry Cloth	Terry cloth,most coming off with this,some impreg on sun exposed sides	1		1	Trailing edge of rudder is starting to blister with one area on port side start to chip heavier imp in Quad II;7" diam area pink stain showing thru STB keel in Quad III	1
08/06/2009	23.6	Port/ NW 120	3	Light to med growth,BA,Bry,pinhead TW with some larger individuals.Almost a 2.5 score	3	Light to med growth,BA,Bry,pinhead TW with some larger individuals.Almost a 2.5 score	3	Light to med growth,BA,Bry,pinhead TW with some larger individuals.Almost a 2.5 score	3	Light to med growth,BA,Bry,pinhead TW with some larger individuals.Almost a 2.5 score	3	Light to med growth,BA,Bry,pinhead TW with some larger individuals.Almost a 2.5 score	3	Light to med growth,BA,Bry,pinhead TW with some larger individuals.Almost a 2.5 score	Terry Cloth		1	Very easy to remove	1		1
08/25/2009	21.7	Port/ NW 120	3	Light to medium BA;pinhead TW,Tun,Bry;slightly heavier growth here	3	Light to medium BA;pinhead TW,Tun,Bry;heavier concentration on starboard and aft port side of hull	3	Light to medium BA;pinhead TW,Tun,Bry;heavier concentration on starboard and aft port side of hull	2	Light to med BA;pinhead TW,Tun,Bry	3	Light to mod BA;pinhead TW,Tun,Bry	3	Light to mod BA;pinhead TW,Tun,Bry	Microfiber Cloth	Used blue microfiber,worked effectively	1	Bow and leading edges embedded with brown algae so a little more cleaning effort there	1	Very good condition	1
09/15/2009	21.7	Port/ NW 120	3	Tun,Bry,TWs	4	Tun,Bry,TWs	4	Tun,Bry,TWs; Port side rudder has a dark algae (like a black smear)	4	Tun,Bry,TWs	4	Tun,Bry,TWs; BA a little heavier	4	Tun,Bry,TWs; BA a little heavier	Terry Cloth		2	worked well, 3 to 4 swipes	1	On rudder,some bubbles or blisters (seems below topcoat);one spot where paint flaked off (very small amount) on rudder as well	1
10/07/2009	19.8	Port/ NW 120	3	TW,Bry,BA thicker in this quadrant	3	Small TW,Bry,BA	3	Small TW,Bry,BA	3	Small TW,Bry,BA	3	Small TW,Bry,BA	3	Small TW,Bry,BA	Terry Cloth		2	Commented seemed easier to clean than last cleaning	1	Where keel meets hull,are about 3 inches long paint thin;bubbles/blisters on rudder,couple have seemed to have popped	1
10/27/2009	20	Port/ NW 120	3	Light to med BA,pinhead and long TW,Bry	3	Light to med BA,pinhead and long TW,Bry	3	Light to med BA,pinhead and long TW,Bry	3	Light to med BA,pinhead and long TW,Bry	3	Light to med BA,pinhead and long TW,Bry	3	Light to med BA,pinhead and long TW,Bry	Terry Cloth		2		1	Coating looks excellent	1
11/17/2009	17.1	Port/ NW 120	3	Bry,TW,BA/purple algae. Fouling increases as go forward on starboard side	3	Bry,TW,BA/purple algae	3	Bry,TW,BA/purple algae	3	Biofilm,TW,Bry	3	Bry,TW,BA/purple algae	3	Bry,TW,BA/purple algae	Terry Cloth	worked well	2	dark purple algae still on rudder, keel impreg starboard side w/ brown algae stalks and on rudder	1	blisters on rudder, some peeling, one spot	1
12/14/2009	15.4	Port/ NW 120	2	BA	2	BA/purple algae	3	BA,Bry,TW, little algae, heavier fouling port side	2	BA,Bry heavier fouling port side	2	BA	2	BA,Bry	Terry Cloth	works well	2	twas easily removed	2	paint on leading edge of keel, paint peeled off, bubbling up	2
01/05/2010	14.9	Port/ NW 120	1	BA,heavier on starboard	2	BA,purple algae	2	BA	1	BA,biofilm	2	BA	2	BA	Terry Cloth		2		2		2
01/28/2010	15.2	Port/ NW 120	2	BA heavy,AS	2	BA heavy,AS	2	BA lite,AS	2	BA,AS	2	BA,AS	2	BA,AS	Terry Cloth		2	Harder to clean than before	1	Areas of thinning,are impreg areas,in front of keel,rudder;blisting peeling off in those areas	2
02/16/2010	16.1	Port/ NW 120	3	BA,Bry,pinhead TW	2	BA,Bry,pinhead TW,purple algae	3	BA,Bry,pinhead TW,purple algae	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW	Terry Cloth		2		2	Small blisters on starboard side of keel	2
03/11/2010	15.7	Port/ NW 120	3	BA,pinhead TW,Bry	3	BA,pinhead TW,Bry	3	BA,pinhead TW,Bry,purple algae	3	BA,pinhead TW,Bry	3	BA,pinhead TW,Bry	3	BA,pinhead TW,Bry	Terry Cloth		2	Waterline thicker algae so slightly harder to clean, esp starboard	2		2
03/30/2010	17.1	Port/ NW 120	2	Very small Bry,pinhead TW,fine biofilm layer	2	Very small Bry,pinhead TW,fine biofilm layer	2	Very small Bry,pinhead TW,fine biofilm layer;heavier BA and biofilm on this side	2	Very small Bry,pinhead TW,fine biofilm layer	2	Very small Bry,pinhead TW,fine biofilm layer	2	Very small Bry,pinhead TW,fine biofilm layer;heavier BA and biofilm on this side	Terry Cloth		1	Coming off very easily, light wiping	1		1
04/27/2010	16.4	Port/ NW 120	3	AS,Bry,BA,ET	3	AS,Bry,BA,ET;heavier concentration on starboard side	3	AS,Bry,BA,ET	3	AS,Bry,BA,ET	3	AS,Bry,BA,ET;some TW along waterline and thru hulls,came off very easily	3	AS,Bry,BA,ET;some TW along waterline and thru hulls,came off very easily	Terry Cloth		3		1		1
05/11/2010	18.3	Port/ NW 120	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm,AS	2	Bry,BA,Biofilm	2	Bry,BA,Biofilm	Terry Cloth	Used TC for all but one small section on starboard aft where BA impreg - used soft nylon brush by hand	3		2		2
06/11/2010	19.8	Port/ NW 120	3	TW,Bry,Tun,Hyd,BA,Biofilm	3	TW,Bry,Tun,Hyd,BA,Biofilm	3	Bry,tun,hyd,BA,Biofilm	3	TW,Bry,Tun,Hyd,BA,Biofilm	3	TW,Bry,Tun,Hyd,BA,Biofilm	3	TW,Bry,Tun,Hyd,BA,Biofilm	Terry Cloth	Combo of long soft hand bristle brush and terry cloth	2	brush removed slime, tc removed tw well	1		1
06/22/2010	21.6	Port/ NW 120	3	BA,Tun,Biofilm	3	BA,Tun,Biofilm	3	BA,Tun,Biofilm	3	BA,Tun,Biofilm,Bry	2	BA,Biofilm	2	BA,Biofilm	Terry Cloth	Used weaved side (per Stan) of microsponge on rudder and at waterline	2		2		2
07/13/2010	18.7	Port/ NW 120	3	TW,Bry,Tun,AS,GA,BA,Biofilm,purple algae	3	TW,Bry,Tun,AS,GA,BA,Biofilm,purple algae	3	TW,Bry,Tun,AS,GA,BA,Biofilm,purple algae	3	TW,Bry,Tun,AS,GA,BA,Biofilm,purple algae	3	TW,Bry,Tun,AS,GA,BA,Biofilm,purple algae	3	TW,Bry,Tun,AS,GA,BA,Biofilm,purple algae	Terry Cloth	combo of terry and blue/white micro sponge	1		1		1
08/06/2010	20.1	Port/ NW 120	3	TW,Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	Terry Cloth		1	Some spots a 2, some spots slightly impreg but still relatively easy	2	Coating in excellent condition	2
08/24/2010	19.2	Port/ NW 120	3	TW(pinhead),Bry,AS,Biofilm	3	TW(pinhead),Bry,AS,Biofilm	3	TW(pinhead),Bry,AS,Biofilm	3	TW(pinhead),Bry,AS,Biofilm	3	TW(pinhead),Bry,AS,BA,Biofilm	3	TW(pinhead),Bry,AS,BA,Biofilm	Carpet	Used carpet for entire bottom	1		2		2
09/14/2010	19	Port/ NW 120	2	TW,Bry,AS,BA,Biofilm: heavier on starboard	2	TW,Bry,AS,BA,Biofilm: heavier on starboard	2	TW,Bry,AS,BA,Biofilm	2	TW,Bry,AS,BA,Biofilm	2	TW,Bry,AS,BA,Biofilm	2	TW,Bry,AS,BA,Biofilm	Carpet		1		1	Port rudder has heavier fouling than STE rudder;damage to keel still there	1
10/06/2010	19.3	Port/ NW 120	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	Carpet	Used combo of terry cloth and carpet	1		2	limited blistering appearing(very minor), leading edge of rudder looks to be thinning, damage to keel	2
10/26/2010	19.1	Port/ NW 120	3	TW,Bry,BA,Biofilm,Hydroids	3	TW,Bry,BA,Biofilm,Hydroids	3	TW,Bry,BA,Biofilm,Hydroids	3	TW,Bry,BA,Biofilm,Hydroids	3	TW,Bry,BA,Biofilm,Hydroids	3	TW,Bry,BA,Biofilm,Hydroids	Carpet	Listing to port side(loaded it up) pictures coating delaminating 8 ft back port side (waterline)	1	99% terry cloth, 1% carpet. Starboard WL impreg brown algae	1	Port WL worse coating condition, starting to chip, little blistering	1

Intersleek - 277' sailboat

Date	Water Temp (C)	Dockside Orientation /Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-PreClean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
10/27/2009	19.9	Port / SE 310	3	TW, Bry,BA present mainly on starboard,	3	TW,Bry,BA present mainly on starboard,1 spot of BA otherwise no brown algae on port side	3	TW,Bry,BA present mainly on starboard,1 spot of BA otherwise no brown algae on port side	3	TW,Bry,BA present mainly on starboard,1 spot of BA otherwise no brown algae on port side	3	TW,Bry,BA present mainly on starboard,1 spot of BA otherwise no brown algae on port side	3	TW,Bry,BA present mainly on starboard,1 spot of BA otherwise no brown algae on port side	Terry Cloth	Started/ended with terry towel	1	Majority of hull very easy to clean with terry cloth	1	Paint may be peeling slightly by the keel in metal locations only,boat slip is in area with limited circulation	1
11/12/2009	17.6	Port / SE 310	2		2	Biofilm on starboard side of hull and keel,	2	TW,Bry	2		2		2		Terry Cloth		1	Comes off with gentle swipes	1	Almost a 3 at centerline,bootstripe below surface aft so hard growth there,slight peeling forward centerline,bottom of keel has minor coating blistering,peeling off on from stern to bow,trailing edges	1
12/10/2009	15	Port / SE 310	3	heavier BA than port side,Bry	3	heavier BA than port side,Bry	3	BA,Bry	3	BA,Bry	3	BA,Bry	3	BA,Bry	Terry Cloth		3	starboard= 3, very impregnated, coating seems thin, port=1	3	same issues as last time, scratches in forward section of boat but looks to be only scratches in brown algae; fouling=no hull damage, paint on keel seems thick	3
01/05/2010	14.8	Port / SE 310	1	Light biofilm	2	Biofilm	1	Biofilm	1	Biofilm	2	Biofilm	1	Biofilm	Terry Cloth	Works, but have to scrub harder on starboard	3	1 on port side, 3 on starboard	3	Peeling in some areas,in areas appears to be very thin,very thin on leading edges	3
01/28/2010	15.2	Port / SE 310	3	BA,AS	3	BA,AS	1	AS,BA	1	AS,BA,very small bryozoans	3	AS,BA	1	AS,BA	White Pad	Port side less fouling easier to clean	1	Cleaning starboard side only	2	Forward leading edge of keel thinning, spots where paint peeling seem to be getting larger	3
02/16/2010	16.2	Port / SE 310	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW,small tunicates on this quad	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW,some impreg at waterline	3	BA,Bry,pinhead TW	Terry Cloth	mostly easy to clean with exception of thin patches	2	Port side more hard growth while starboard more algae/slime	2	3 minor scratches quad 1,back edge of keel peeling off,	2
03/11/2010	16.3	Port / SE 310	3	BA,Bry,pinhead TW,purple algae	3	BA,Bry,pinhead TW,purple algae;more soft growth starboard side	3	BA,Bry,pinhead TW,purple algae;more hard growth port side	3	BA,Bry,pinhead TW,purple algae	3	BA,Bry,pinhead TW,purple algae	3	BA,Bry,pinhead TW,purple algae	Terry Cloth		3	Starboard waterline,algae really impregnated,2 on port and 3 on starboard	3	Coating has same peeling issues as noted during last inspection	3
03/30/2010	17.1	Port / SE 310	1	Lite biofilm only	1	Lite biofilm only	1	Lite biofilm only	1	Lite biofilm only	1	Lite biofilm only	1	Lite biofilm only	N/A		0		2	Peeling at waterline,new paint at raised bootstripe not adhering,otherwise coating in good cond.	2
04/16/2010	17.6	Port / SE 310	3	Biofilm,BA,Bry	3	Biofilm,BA,Bry,heavier concent. On SB side;rudder BA,Bio,small bry	3	Biofilm,BA,Bry,tiny pinhead TW;lighter concent. Of growth on shaded side (port)	3	Biofilm,BA,Bry,tiny pinhead TW;lighter concent. Of growth on shaded side (port)	3	Biofilm,BA,Bry,heavier concent. On SB side;rudder BA,Bio,small bry	3	Biofilm,BA,Bry,tiny pinhead TW;lighter concent. Of growth on shaded side (port)	Terry Cloth		2		2	Waterline issue below bootstripe,on strut paint seems to be peeling;otherwise coating in good condition **look at field sheet for add notes	2
05/14/2010	18.4	Port / SE 310	3	AS,Bry,BA,Biofilm - less fouling on starboard side	3	AS,Bry,BA,Biofilm - less fouling on starboard side	3	AS,Bry,BA,Biofilm - heavier fouling on port side, looks like fish lips on side	3	AS,Bry,BA,Biofilm - heavier fouling on port side, looks like fish lips on side	3	AS,GA,BA,Biofilm	3	AS,GA,BA,Biofilm	Terry Cloth	spot cleaned on aft sect by rudder with very used white pad to remove impreg algae	2		1		1
06/01/2010	18.9	Port / SE 310	2	TW,Bry,BA,Biofilm,hydroids	2	TW,Bry,BA,Biofilm	2	TW,Bry,BA,Biofilm	2	TW,Bry,BA,Biofilm	2	TW,Bry,BA,Biofilm	2	TW,Bry,BA,Biofilm	Terry Cloth		1		1		1
06/22/2010	22.9	Port / SE 310	2	BA,Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm	3	Bry,BA,Biofilm	2	BA,Biofilm	2	BA,Biofilm	Terry Cloth		1		1	Stan (I-Paint) was present for inspection	1
07/13/2010	19.8	Port / SE 310	3	Bry,BA,Biofilm	3	Bry,Tun,BA,Biofilm	3	Bry,Tun,BA,Biofilm	3	Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	3	TW,Bry,Tun,BA,Biofilm	Microfiber Cloth	Used squeegee for hard growth first,blue/white micro sponge at WL,used green mitt for biofilm/silt,mixed in terry cloth	2	Mixed,dependent on tool	1		1
08/08/2010	20.6	Port / SE 310	3	TW,Bry,AS,BA,Biofilm,purple algae	3	TW,Bry,AS,BA,Biofilm,purple algae	3	TW,Bry,AS,BA,Biofilm,purple algae	3	TW,Bry,AS,BA,Biofilm,purple algae	3	TW,Bry,AS,BA,Biofilm,purple algae	3	TW,Bry,AS,BA,Biofilm,purple algae	Terry Cloth	Used carpet on rudder,wants to clean rudder and starboard WL with carpet for now on	2		1	Evidence of perch feeding on biofouling on majority of hull/keel starting 1 ft below waterline	1
08/20/2010	21.4	Port / SE 310	2	BA,Biofilm,Bryozoan,hydroid,TW (pinhead)	2	BA,Biofilm,Bryozoan,hydroid,TW (pinhead)	2	BA,Biofilm,Bryozoan,hydroid,TW (pinhead)	2	BA,Biofilm,Bryozoan,hydroid,TW (pinhead)	2	BA,Biofilm,Bryozoan,hydroid,TW (pinhead)	2	BA,Biofilm,Bryozoan,hydroid,TW (pinhead)	Terry Cloth		1		1	Coating peeling off metal strut, but not orwse than last time	1
09/14/2010	20.4	Port / SE 310	2	pinhead TW,Bry,BA,Biofilm	2	pinhead TW,Bry,BA,Biofilm	2	pinhead TW,Bry,BA,Biofilm	2	pinhead TW,Bry,BA,Biofilm	2	pinhead TW,Bry,BA,Biofilm	2	pinhead TW,Bry,BA,Biofilm	Carpet	Used combo carpet/terry cloth	2	Port-easy, starboard much harder to clean due to brown algae impreg. Aft section rudder a little harder	1		1
10/06/2010	19.3	Port / SE 310	0		0		0		0		0		0		N/A		0		1		N/A
10/29/2010	19.9	Port / SE 310	3	Pinhead TW,Bry,Tun,AS,BA,Biofilm,Hydroids,Purple algae (heavier fouling on starboard side)	3	Pinhead TW,Bry,Tun,AS,BA,Biofilm,Hydroids,Purple algae (Heavier fouling on starboard side)	3	Pinhead TW,Bry,Tun,AS,BA,Biofilm,Hydroids,Purple algae(coating blistering on intake thru hull fitting on this quad)	3	Pinhead TW,Bry,Tun,AS,BA,Biofilm,Hydroids,Purple algae(peeling in this quad, prob where blocks were)	3	Pinhead TW,Bry,Tun,AS,BA,Biofilm,Hydroids,Purple algae(minor GA)	3	Pinhead TW,Bry,Tun,AS,BA,Biofilm,Hydroids,Purple algae(minor GA)	Carpet	Combo of terry cloth and carpet	3	Fouling seems to be really embedded, much higher effort level, almost took twice as long to clean, as previous times.	1	areas from before where thinning and looks like it might be peeling, really very minor.	1

Intersieck - 30' sailboat

Hempasil - Gray (18' power boat)	Date	Water Temp (C)	Dockside Orientation/Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-PreClean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
	06/23/2009	20.6	Port	2	Primarily algal slime, Minor (very small) TW	2	Primarily algal slime, Minor (very small) TW	2	Primarily algal slime, Minor (very small) TW	2	Primarily algal slime, Minor (very small) TW	2	Primarily algal slime, Minor (very small) TW	2	Primarily algal slime, Minor (very small) TW	N/A		0		1	Some paint flaking off a 3' section on keel	N/A
	07/15/2009	20.9	Port	4	Tun,Bry, small juvenile TW, BA ;paint bubbling/flaking off along keel in 3"x6" area	4	Tun,Bry, small juvenile TW, BA	4	Tun,Bry, small juvenile TW, BA;6"x12" patch of paint scraped, edge flaking	4	Tun,Bry, small juvenile TW, BA	4	Tun,Bry, small juvenile TW, BA	4	Tun,Bry, small juvenile TW, BA	Terry Cloth	Microfiber somewhat hard,not coming off easily,tried plastic scraper on tiny portion but not very effective;used terrycloth and was easy to remove with a few wipes	3	Terry cloth appeared to be effective and kept paint intact.	1	1 patch appeared to be missing paint or thinning, perhaps where pads were in Quadrant 3	1
	08/04/2009	23.6	Port	3	BAjuvenile TW,Bry,Tun	3	BAjuvenile TW,Bry,Tun	3	BAjuvenile TW,Bry,Tun	3	BAjuvenile TW,Bry,Tun	3	BAjuvenile TW,Bry,Tun	3	BAjuvenile TW,Bry,Tun	White Pad	Microfiber seemed to gum up,felt like it was grabbin and removing paint,did carpet on small section and paint began to flake off.Decided to call supplier before continuing (sent	4		1	Paint began flaking off with cleaning,seems rubbery or gummy,peeling off when rubbed over	3

Discontinued this boat

Date	Water Temp (C)	Dockside Orientation/Degree Headline	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-PreClean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
05/14/2009	20.5	Port / NE 200	3	Bry,BA,Tun	3	Bry,BA,Tun	3	Bry,BA,Tun	3	Bry,BA,Tun	3	Bry,BA,Tun	3	Bry,BA,Tun	White Pad	6-7 swipes w/micro and getting slimy, seems to be grabbing, also issue w/carpet, terry cloth - press very hard, sev swipes/Alex concern about scratching/pull/white pad-lite pressure, no scratching, 1-2 swip	2		2	Small 6 in area of chipping/peeling centerline of hull, 4in forward of keel in Quad I, 10in area of chipping in Quad III	2
06/03/2009	19.9	Port / NE 200	3	BA, juvenile Bry, Tun, small TW (pinheads and spiral)	3	BA, juvenile Bry, Tun, small TW (pinheads and spiral)	3	BA, juvenile Bry, Tun, small TW (pinheads and spiral)	3	BA, juvenile Bry, Tun, small TW (pinheads and spiral)	3	BA, juvenile Bry, Tun, small TW (pinheads and spiral)	3	BA, juvenile Bry, Tun, small TW (pinheads and spiral)	White Pad	5 to 6 swipes with white pad. Lite pressure.	2	Discussed increasing frequency to 2 weeks. Talk to supplier before increasing freq or tool type. Refer to note on field sheet about rudder - not as smooth as hull, more pinheads/pocked	2		2
06/23/2009	20.7	Port / NE 200	3	Bry, TW-small spirals/pinheads, BA, little more heavily fouled on starboard side	3	Bry, TW-small spirals/pinheads, BA, little more heavily fouled on starboard side	3	Bry, TW-small spirals/pinheads, BA	3	Bry, TW-small spirals/pinheads, BA	3	Bry, TW-small spirals/pinheads, BA	3	Bry, TW-small spirals/pinheads, BA	White Pad	Came off with lite pressure, only a couple spots where had to push harder, maybe increase frequency, and use scraper before using white pad	2		1		1
07/09/2009	20	Port / NE 200	3	Moderate silting, early stages Bry and TW	3	Moderate silting, early stages Bry and TW	3	Moderate silting, early stages Bry and TW	3	Moderate silting, early stages Bry and TW	3	Moderate silting, early stages Bry and TW	3	Moderate silting, early stages Bry and TW	White Pad	Carpet need mutple wipes and needed hard pressure to fully remove harder growth, white pad took a couple passes but removed relatively easily	2	lite hard fouling all over, relatively easy to come off with white pad	1	3 small areas 1"x2" long of paint chipping or scraped in Quad I; 1 small area 8"x2" of paint chipping off in Quad III; 1 small area 1"x2" of paint chipping in Quad IV; 3" scrap on bow in Quad V; Multiple scrapes along hull; two weeks since last cleaning. M. Peavy suggests increasing frequency	2
08/06/2009	23	Port / NE 200	3	BA, pinhead TW (some larger ones but minor), Bry, some hydroids	3	BA, pinhead TW (some larger ones but minor), Bry, some hydroids	3	BA, pinhead TW (some larger ones but minor), Bry, some hydroids	3	BA, pinhead TW (some larger ones but minor), Bry, some hydroids	3	BA, pinhead TW (some larger ones but minor), Bry, some hydroids	3	BA, pinhead TW (some larger ones but minor), Bry, some hydroids	Purple Pad	Up to 6-10 in below waterline, use purple pad, below that seems to be removing paint (thinning), gently used scraper to remove hard growth, then gently wiped down with white pad.	2	Had to gently use scraper for hard growth, recommended going to a 2 week frequency	1		1
08/18/2009	22.2	Port / NE 200	3	Light BA, pinhead TW on majority of surface, Bry	3	Light BA, pinhead TW on majority of surface, Bry	3	Light BA, pinhead TW on majority of surface, Bry	3	Light BA, pinhead TW on majority of surface, Bry	3	Light BA, pinhead TW on majority of surface, Bry	3	Light BA, pinhead TW on majority of surface, Bry	White Pad		2		2	Scratches at bow, port and starboard side	2
09/02/2009	23.4	Port / NE 200	3	BA, pinhead TW, Bry, Tun	3	BA, pinhead TW, Bry, Tun	3	BA, pinhead TW, Bry, Tun a little heavier on port side	3	BA, pinhead TW, Bry, Tun	3	BA, pinhead TW, Bry, Tun	3	BA, pinhead TW, Bry, Tun	Microfiber Cloth	Used blue microfiber, 2 week frequency	2	light to med effort	1		1
09/15/2009	21.8	Port / NE 200	4	Bry, TW, Biofilm	4	Bry, TW, Biofilm; TW getting bigger as go aft	4	Bry, TW, Biofilm	4	Bry, TW, Biofilm	4	Bry, TW, Biofilm	4	Bry, TW, Biofilm	White Pad		2	Almost a 3, a little harder in some areas	2	Scratches noted, mainly on keel area	2
09/30/2009	19.8	Port / NE 200	3	BA, heavy concentration of pinhead and short TW, Bry, juvenile Tun, starboard has heavier growth than port	3	BA, heavy concentration of pinhead and short TW, Bry, juvenile Tun, starboard has heavier growth than port	3	BA, heavy concentration of pinhead and short TW, Bry, juvenile Tun	3	BA, heavy concentration of pinhead and short TW, Bry, juvenile Tun	3	BA, heavy concentration of pinhead and short TW, Bry, juvenile Tun, starboard has heavier growth than port	3	BA, heavy concentration of pinhead and short TW, Bry, juvenile Tun	Terry Cloth	tried microfiber but was grabbing the coating, not smooth so tried terry cloth and it worked well	1		1	Collision damage on leading edge on bow, coating is scraped, chipped below boot stripe; otherwise coating is very intact and smooth	1
10/13/2009	19.3	Port / NE 200	4	Pinhead TW, Bry, BA, dark purple slime-like algae all over; heavier on starboard	4	Pinhead TW, Bry, BA, dark purple slime-like algae all over; heavier on starboard/aft	3	Pinhead TW, Bry, BA, dark purple slime-like algae all over; heavier on aft	3	Pinhead TW, Bry, BA, dark purple slime-like algae all over	4	Pinhead TW, Bry, BA, dark purple slime-like algae all over; heavier on starboard/aft	4	Pinhead TW, Bry, BA, dark purple slime-like algae all over; heavier on aft	Terry Cloth	Tried microfiber but don't getting all bryozoans/purple algae w/out several swipes. Used plastic scraper in very localized areas for the larger TW (look at diver's field sheet for locations)	2	Portside easier (1), starboard much harder (gave it a 3)	1	3 scrapes in forward area with TW growing in them; Paint thinning in front of shaft, seems to be progressing	1
10/27/2009	19.8	Port / NE 200	3	Starboard side heavier than Port, BA much heavier there, pinhead and long TW, Bry	3	Starboard side heavier than Port, BA much heavier there, pinhead and long TW, Bry	3	Very light algae growth on Port side, pinhead and long TW, Bry	3	Very light algae growth on Port side, pinhead and long TW, Bry	3	Starboard side heavier than Port, BA much heavier there, pinhead and long TW, Bry	3	Very light algae growth on Port side, pinhead and long TW, Bry	White Pad	Started with terry cloth but not effective, used white pad	3	Hard to clean effectively w/out impacting the coating integrity, scrubbing with terry seemed to be pushing around or removing coating	2	Coating to be thinning out on general underside of hull but not at waterline	3
11/12/2009	17.6	Port / NE 200	3	Med to heavy BA on starboard side, pinhead TW, Bry	3	Med to heavy BA on starboard side, pinhead TW, Bry	2	Very clean, hardly any algae except the last 6 feet of aft. Hull has linear and pinhead TW, very minor levels of bryozoans	2	Very clean, very light BA growth and very minor hard growth	3	BA, pinhead TW, juv Bry, TW above bootstripe aft	2	Very clean, very light BA growth and very minor hard growth	White Pad		2	Port side seemed easier, where coating thicker, very easy to clean, noticeably harder where coating thinner	2	Thin in some spots, thick in others, port aft section seems thinner	2
11/24/2009	16.8	Port / NE 200	3	Med to heavy BA growth w/ spots of algae impreg, pinhead TW	3	Med to heavy BA growth w/ spots of algae impreg. Some pinhead TW, heavier growth aft	3	Aft port side of hull has med algae growth and some minor TW, heavier growth aft	3	Very light BA, pinhead TW	3	Aft port side of hull has med algae growth and some minor TW, heavier growth aft	3	Med to heavy BA growth w/ spots of algae impreg, some pinhead TW, heavier growth aft	White Pad	terry cloth-Port and white pad- starboard only, on port side 2ft below waterline, used white pad to remove tw	2	1 on port, 2 on starboard	2	port aft-2, coating thin, heavier growth present. Coating seems very inconsistent in thickness	2
12/14/2009	15.5	Port / NE 200	3	BA/purple algae, pinhead TW all over, heavier starboard side	3	BA/purple algae, pinhead TW all over, heavier starboard side	3	BA/purple algae, pinhead TW all over, heavier starboard side, less fouling, small Tun	3	BA/purple algae, pinhead TW all over, heavier starboard side	3	BA/purple algae, pinhead TW all over, heavier starboard side	3	BA/purple algae, pinhead TW all over, heavier starboard side	White Pad	terry cloth and white pad	3	harder on starboard	2	spots where paint wearing thin pretty spread out, turning grey to white	2
12/30/2009	14.8	Port / NE 200	3	BA, thicker on starboard	3	BA, thicker on starboard	2	BA only	2	BA only	3	BA, thicker on starboard	2	BA only	White Pad		1	1 on prt side, 1-2 on starboard side	2	No major spots or delam, just thin	2
01/12/2010	15.3	Port / NE 200	3	Purple/BA, pinhead TW, soft orange Bry	3	Purple/BA, pinhead TW, soft orange Bry	3	Purple/BA, pinhead TW, soft orange Bry	3	Purple/BA, pinhead TW, soft orange Bry	3	Purple/BA, pinhead TW, soft orange Bry	3	Purple/BA, pinhead TW, soft orange Bry	White Pad	Used scrapers where previously reported scratches were located	3	Harder on starboard, easier on port though there was slightly heavier growth on port	2	Thinning in spots, scratches from before	3
01/28/2010	15.3	Port / NE 200	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	White Pad	Used plastic scraper on boot stripe	3		2	Thinning spots	2
02/09/2010	15.6	Port / NE 200	2	BA, AS, act between 1-2	1	BA, AS	2	BA, AS, act between 1-2	2	BA, AS, act between 1-2	1	AS	1	AS	N/A		0		2		N/A
02/16/2010	16.1	Port / NE 200	3	BA, Bry, pinhead TW, purple algae, heavier BA on starboard side	3	BA, Bry, pinhead TW, purple algae	3	A, Bry, pinhead TW, purple algae	3	A, Bry, pinhead TW, purple algae	2	A, Bry, pinhead TW, purple algae	3	BA, Bry, pinhead TW, purple algae	White Pad		3	Where paint thinning, effort more difficult	3	Paint appears to be thinning in spots	3
03/11/2010	16.3	Port / NE 200	4	BA, purple algae, Bry, pinhead TW	4	BA, purple algae, Bry, pinhead TW	4	BA, purple algae, Bry, pinhead TW	4	BA, purple algae, Bry, pinhead TW	4	BA, purple algae, Bry, pinhead TW	4	BA, purple algae, Bry, pinhead TW	White Pad		4	Brown spots hard to get off; starboard a 4, Port a 3	3		3
03/30/2010	17.2	Port / NE 200	3	BA, Bry, TW	3	BA, Bry, TW	3	BA, Bry, TW; lighter on starboard; aft sect slightly heavier	3	BA, Bry, TW; lighter on starboard; aft sect slightly heavier	3	BA, Bry, TW; lighter on starboard; aft sect slightly heavier	3	BA, Bry, TW	Purple Pad		4		2		2
04/27/2010	16.4	Port / NE 200	3	TW, Bry, BA, Biofilm, BT	4	TW, Bry, BA, Biofilm, BT	4	TW, Bry, BA, Biofilm, BT	4	TW, Bry, BA, Biofilm, BT	4	TW, Bry, BA, Biofilm, BT	4	TW, Bry, BA, Biofilm	Purple Pad		1		3		3
05/11/2010	18.6	Port / NE 200	3	Bry, BA, AS, Biofilm - heavier on starboard side, purple algae spot on this quad	3	Bry, BA, AS, Biofilm - heavier on starboard side, purple algae spot on this quad	3	Bry, BA, AS, Biofilm, hydroids, purple algae	3	Bry, BA, AS, Biofilm, hydroids, purple algae	3	Bry, BA, AS, Biofilm, hydroids	3	Bry, BA, AS, Biofilm, hydroids, purple algae	White Pad	Used thin white pad for entire boat	2		2		2
06/01/2010	20.3	Port / NE 200	4	TW, Bry, B, Tun, AS, GA, BA, Biofilm	4	TW, Bry, B, Tun, AS, GA, BA, Biofilm	4	TW, Bry, B, Tun, AS, GA, BA, Biofilm	4	TW, Bry, B, Tun, AS, GA, BA, Biofilm	4	TW, Bry, B, Tun, AS, GA, BA, Biofilm	4	TW, Bry, B, Tun, AS, GA, BA, Biofilm	Purple Pad	Used plastic scraper to remove initial layer of hard growth on most of hull	3		2		2
06/22/2010	20.4	Port / NE 200	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, Tun, BA, Biofilm	4	TW, Bry, BA, Biofilm	White Pad	Used pastic scrapers for areas with heavy TW	2		4	back edge of rudder removed Coating thinning a lot in random sections	4
07/07/2010	19.7	Port / NE 200	3	TW, Bry, BA	3	TW, Bry, BA	3	TW, Bry, BA; Port keel very clean almost no fouling. Less fouling port side	3	TW, Bry, BA	3	TW, Bry, BA	3	TW, Bry, BA	Purple Pad	Used combo of white pas and purple pad, due to inconsistency in coating	1		3		3
07/26/2010	19.4	Port / NE 200	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	Purple Pad		3		4		4
08/06/2010	20.1	Port / NE 200	2	TW (very tiny pinheads), AS, BA, Biofilm	2	TW (very tiny pinheads), AS, BA, Biofilm	2	TW (very tiny pinheads), AS, BA, Biofilm	2	TW (very tiny pinheads), AS, BA, Biofilm	2	TW (very tiny pinheads), AS, BA, Biofilm	2	TW (very tiny pinheads), AS, BA, Biofilm	N/A		0		3		N/A
08/18/2010	19.5	Port / NE 200	3	TW, Bry, AS, BA, Biofilm, hydroids	3	TW, Bry, AS, BA, Biofilm, hydroids	3	TW, Bry, AS, BA, Biofilm, hydroids	3	TW, Bry, AS, BA, Biofilm, hydroids	3	TW, Bry, AS, BA, Biofilm, hydroids	3	TW, Bry, AS, BA, Biofilm, hydroids	Purple Pad	Used rubber squeegee (honey-combed side) to knock off most growth then purple pad for rest	3		3		3
08/31/2010	19.5	Port / NE 200	3	TW (pinhead), Bry, AS, BA, Biofilm	3	TW (pinhead), Bry, AS, BA, Biofilm	3	TW (pinhead), Bry, AS, BA, Biofilm	3	TW (pinhead), Bry, AS, BA, Biofilm	3	TW (pinhead), Bry, AS, BA, Biofilm	3	TW (pinhead), Bry, AS, BA, Biofilm	Purple Pad		2	Very light pressure w/purple pad. Light swirls brings it right out	2		2
09/14/2010	18.8	Port / NE 200	3	TW, Bry, GA, BA, Biofilm, hydroids	3	TW, Bry, GA, BA, Biofilm, hydroids	3	TW, Bry, GA, BA, Biofilm, hydroids	3	TW, Bry, GA, BA, Biofilm, hydroids	3	TW, Bry, GA, BA, Biofilm, hydroids	3	TW, Bry, GA, BA, Biofilm	Purple Pad		2	Wipes off very easily, hard fouling present is very small and attached to soft fouling	2		2
10/06/2010	19.6	Port / NE 200	1.5	BA, Biofilm	1.5	BA, Biofilm	1.5	BA, Biofilm	1.5	BA, Biofilm	3	TW, Bry, GA, BA, Biofilm	3	TW, Bry, GA, BA, Biofilm	Carpet	Used combo of terry and carpet	1	Cleaned WL only	1		1
10/26/2010	19.4	Port / NE 200	4	TW, Bry, BA, Biofilm	4	TW, Bry, BA, Biofilm	4	TW, Bry, BA, Biofilm	4	TW, Bry, BA, Biofilm	4	TW, Bry, BA, Biofilm	4	TW, Bry, BA, Biofilm	White and Purple Pads	Both tools worn out	3		3	Borderline of 20%	3

Hemphill - Gray (36' sailboat)

Hempasil - Red (18' power boat)	Date	Water Temp (C)	Dockside Orientation /Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-PreClean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
	01/05/2010	14.7	Port	0		0		0		0		1	Biofilm	1	Biofilm	N/A		0		1		N/A
	01/28/2010	15.2	Port	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	3	BA,pinhead TW	3	BA,pinhead TW	Microfiber Cloth		1	Water line only	1		1
	02/16/2010	16.1	Port	1	Biofilm,TW very minor	1	Biofilm,TW very minor	1	Biofilm,TW very minor	1	Biofilm,TW very minor	1	Biofilm,TW very minor	1	Biofilm,TW very minor	N/A		0		1		N/A
	03/11/2010	16.4	Port	1	Biofilm, BA	1	Biofilm, BA	1	Biofilm, BA	1	Biofilm, BA	1	Biofilm, BA	1	Biofilm, BA	N/A		0		1	Excellent condition	N/A
	04/27/2010	17.6	Port	3	TW,Bry,BA, Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA, Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm	Terry Cloth		1		1		1
	05/14/2010	18.9	Port	2	TW,AS,Bry, BA	2	TW,AS,Bry,BA	2	TW,AS,Bry, BA	2	TW,AS,Bry,BA	2	TW,AS,BA,Biofilm	2	TW,AS,BA,Biofilm	N/A	Decided not to clean,very light levels of growth and immed was removed with the slightest touch of fingertip	0		1		N/A
	06/01/2010	18.9	Port	3	TW,Bry,BA, Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA, Biofilm	3	TW,Bry,BA,Biofilm	4	TW,Bry,BA,GA,Biofilm	4	TW,Bry,BA,GA,Biofilm	Terry Cloth		2		1		1
	06/22/2010	20.4	Port	2	BA,Biofilm	2	BA,Biofilm	2	BA,Biofilm	2	BA,Biofilm	3	TW,Bry,BA,Biofilm	3	TW,Bry,BA,Biofilm	Terry Cloth	Used Harper hand Brush #283, on starboard aft section where black slime	1		2		2
	07/13/2010	18.7	Port	3	TW,AS,GA, BA	2	TW,AS,GA,BA	2	TW,AS,GA, BA	2	TW,AS,GA,BA	3	TW,AS,GA,BA	3	TW,AS,GA,BA	Microfiber Cloth	Used blue and white micro sponge	2	Only place harder than 1 was starboard WL	1	2"x3" area of chipping on centerline of hull in Quad I.Coating peeling off of hull fitting in quad IV	1
	08/07/2010	18.9	Starboard	2	Bry,AS,GA,BA, Biofilm	1	AS,GA,BA,Biofilm	1	AS,GA,BA, Biofilm	2	Bry,AS,GA,BA, Biofilm	1	Bry,AS,GA,BA	1	AS,GA,BA	Terry Cloth		1	Gently wiped down areas with fouling rating of 2	2		2
	08/31/2010	19.5	Port	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	3	TW,Bry,GA,BA,Biofilm	3	BA,Bry, TW(pinheads),hydr oids,GA	Terry Cloth	Used very old purple pad on small section of starboard aft	2	Water line only	2		2
	09/13/2010	19	Port	1	AS,BA	1	AS,BA	1	AS,BA	1	AS,BA	2	AS,BA,Biofilm	2	AS,BA,Biofilm	N/A		0		1		N/A
10/06/2010	19.5	Port	4	TW,Bry,Tun, BA,Biofilm	4	TW,Bry,BA,Biofilm	4	TW,Bry,BA, Biofilm	4	TW,Bry,BA,Biofilm	4	TW,Bry,GA,BA,Biofilm	4	TW,Bry,GA,BA,Biofilm	Purple Pad		2		3		3	
10/26/2010	19.1	Starboard	3	BA,Biofilm	3	BA,Biofilm	3	BA,Biofilm	3	BA,Biofilm	2	BA,Biofilm	2	BA,Biofilm	Carpet	Terry cloth didn't clean well, used carpet mainly	2		1	Coating appears to be missing from hull. Couple of chips but very good otherwise.	2	

Date	Water Temp (Celsius)	Dockside Orientation/ Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-PreClean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
07/14/2009	21.6	Port / SW 30	1		1		1		1		2		2		N/A		0	No cleaning required	1	Some oxidation on bottom of keel, small crackon trailing edge, slightly more fouling a waterline, looks good otherwise	N/A
08/06/2009	23.4	Port / SW 30	4	TW,Bry,BA,hydroids on waterline mainly	2	Same as I, but hydroids heavier aft, underneath, rudder has less fouling than rest of hull	4	Same as I, but hydroids heavier aft, underneath, rudder has less fouling than rest of hull	4	TW,Bry,BA,hydroids on waterline mainly	4	TW,Bry,BA,hydroids on waterline mainly	4	TW,Bry,BA,hydroids on waterline mainly	Terry Cloth	Microfiber taking all but TW off, same with carpet, lightly used rubber scraper to remove hard growth and hydroids, used terry cloth after and worked great.	2	Suggested getting microfiber that was a little coarser, may be able to use that next time instead	1	6 wks since applied, first cleaning. Observed some pink spots forming on coating	1
08/25/2009	21.9	Port / SW 30	3	BA, pinhead TW, Tun, Bry	3	BA, pinhead TW, Tun, Bry	3	BA, pinhead TW, Tun, Bry	3	BA, pinhead TW, Tun, Bry	3	BA, pinhead TW, Tun, Bry, bow waterline to about 7' back has long flowing GA	3	BA, pinhead TW, Tun, Bry	White Pad	Microfiber and terry cloth seem to be sticking, not getting everything off	3	Waterline relatively easy, quads 1-4 heavier growth, harder to clean, bryozoans creating a slick surface that is harder to clean	1	Alex noted that bootstripe needs to be higher, seems to be sitting lower so no hull coating protecting boat when there is more weight on boat; suggested to adjust frequency to 2 weeks	1
09/15/2009	21	Port / SW 30	3	TW, Bry, algae	4	TW, Bry, algae; growth thicker as go aft	4	TW, Bry, algae; growth thicker as go aft	3	TW, Bry, algae	4	TW, Bry, algae	4	TW, Bry, algae	White Pad	Felt had to scrub too aggressively with microfiber or terry cloth, white pad worked well	3		1		1
10/07/2009	19.8	Port / SW 30	4	Pinhead and longer TW, Tun, Bry, light purple and brown film	4	Pinhead and longer TW, Tun, Bry, light purple and brown film; dark purple spots on rudder	4	Pinhead and longer TW, juvenile Tun, Bry, light purple and brown film; dark purple spots on rudder	4	Pinhead and longer TW, juvenile Tun, Bry, light purple and brown film; BA thicker here	4	Pinhead and longer TW, juvenile Tun, Bry, light purple and brown film; BA thicker here	4	Pinhead and longer TW, juvenile Tun, Bry, light purple and brown film; BA thicker here	White Pad		3	Had to put firm pressure, didn't think going to next tool would be necessary but maybe use plastic scraper and white pad in future	1	There were areas starboard aft that seemed tougher to clean, like there was no coating, in several stripes	1
10/27/2009	19.9	Port / SW 30	3	BA, pinhead and long TW, small to med Bry, Tun	3	BA, pinhead and long TW, small to med Bry, Tun	3	BA, pinhead and long TW, small to med Bry, Tun	3	BA, pinhead and long TW, small to med Bry, Tun	3	BA, pinhead and long TW, small to med Bry, Tun	3	BA, pinhead and long TW, small to med Bry, Tun	White Pad	Started with micro, jumped to white because known tendencies with paint, used white pad to clean	2	Some areas needed a little firmer than 2 to get them clean, but overall rating a 2	1	This paint appears evenly applied and seems to be working well	1
11/17/2009	17.3	Port / SW 30	3	small pinhead TW, Bry, BA/purple algae	3	small pinhead TW, Bry, BA/purple algae	3	small pinhead TW, Bry, BA/purple algae, but more heavily fouled	3	small pinhead TW, Bry, BA/purple algae, but more heavily fouled	3	small pinhead TW, Bry, BA/purple algae	3	small pinhead TW, Bry, BA/purple algae but more heavily fouled, long green algae near bow	White Pad	based on previous efforts with same level and types of fouling, team decided to begin with white pad instead of microfiber cloth, worked well	3		2	coating looks good, etches or scratches	2
12/14/2009	15.6	Port / SW 30	3	heavier fouling on starboard, BA/purple algae, Bry	3	heavier fouling on starboard, BA/purple algae, Bry	3	BA/purple algae, Bry	3	BA/purple algae, Bry	3	heavier fouling on starboard, BA/purple algae, Bry	3	heavier fouling on starboard, BA/purple algae, Bry	White Pad		3	removed everything, pink algae hard to remove, harder on starboard side	2	spots were thinning, 10 spots randomly placed on hull	2
01/05/2010	15.2	Port / SW 30	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	2	BA, Purple algae, Bry	White Pad	Mix of white with terry	3		2		2
01/28/2010	15.2	Port / SW 30	3	Med BA, AS, Purple algae, pinhead TW	3	Med BA, AS, Purple algae, pinhead TW	3	Med BA, AS, Purple algae, pinhead TW - heavier	2	Lighter AS, mod Purple algae, pinhead TW	3	BA, AS, pinhead TW, purple algae	2	Mix of fouling (Med BA, AS, Purple algae, pinhead TW), 2 forward, 1 mid, 3 aft	Purple Pad		2		2		2
02/16/2010	16.1	Port / SW 30	3	Purple/BA, pinhead TW, Bry	3	Purple/BA, pinhead TW, Bry	3	Purple/BA, pinhead TW, Bry	3	Purple/BA, pinhead TW, Bry	3	Purple/BA, pinhead TW, Bry	3	Purple/BA, pinhead TW, Bry	White Pad	Used plastic scraper in a few areas with TW	3		2	Appear to be slightly delaminating on some areas of waterline	2
03/09/2010	13.6	Starboard / NE 210	3	BA, purple algae, pinhead TW, Bry	3	BA, purple algae, pinhead TW, Bry	3	BA, purple algae, pinhead TW, Bry	3	BA, purple algae, pinhead TW, Bry	3	BA, purple algae, pinhead TW, Bry; GA increases as towards stern	3	BA, purple algae, pinhead TW, Bry; GA increases as towards stern	Purple Pad		3	Scrubbed harder starboard	3	Peeling at waterline, primarily forward aft section, Patches of up to 3 inch where paint missing	3
03/11/2010	16	Port / SW 30	3	BA, Purple algae, GA, Bry, pinhead TW	3	BA, Purple algae, GA, Bry, pinhead TW	3	BA, Purple algae, GA, Bry, pinhead TW; more algae portside	3	BA, Purple algae, GA, Bry, pinhead TW	3	BA, Purple algae, GA, Bry, pinhead TW	3	BA, Purple algae, GA, Bry, pinhead TW	White Pad		3	Purple algae harder to get off, thinning areas make it harder to clean	2		3
03/30/2010	17.2	Port / SW 30	3	BA, Bry, TW	3	BA, Bry, TW	3	BA, Bry, TW	3	BA, Bry, TW	3	BA, Bry, TW	3	BA, Bry, TW	Purple Pad		2		1	Keel has some cracking, starboard towards top. See some inconsistency in paint (thinning)	2
04/27/2010	16.4	Port / SW 30	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm, BT	3	TW, Bry, BA, Biofilm, BT	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	Purple Pad		2		2		3
05/11/2010	18.4	Port / SW 30	3	Bry, AS, GA, BA, purple algae	3	Bry, AS, GA, BA, purple algae	3	Bry, AS, GA, BA, purple algae	3	Bry, AS, GA, BA, purple algae	3	Bry, AS, GA, BA, purple algae	3	Bry, AS, GA, BA, Biofilm	White Pad	Used thin white pad for entire boat	3		2		2
06/01/2010	18.6	Port / SW 30	5	TW, Bry, Tun, BA, Biofilm	5	TW, Bry, Tun, BA, Biofilm	5	TW, Bry, Tun, BA, Biofilm	5	TW, Bry, Tun, BA, Biofilm	5	TW, Bry, Tun, BA, Biofilm	5	TW, Bry, GA, BA, Biofilm	White Pad		4		3		3
06/22/2010	21.9	Port / SW 30	5	TW, Bry, BA, Tun, Biofilm	5	TW, Bry, BA, Tun, Biofilm	5	TW, Bry, BA, Tun, Biofilm	5	TW, Bry, BA, Tun, Biofilm	5	TW, Bry, BA, Tun, Biofilm	5	TW, Bry, BA, Tun, Biofilm	Purple Pad	Used squeegee scraper to remove hard growth	3		3		3
07/13/2010	18.8	Port / SW 30	4	TW, Bry, Tun, AS, BA, Biofilm, purple algae, starboard higher concentration	4	TW, Bry, Tun, AS, BA, Biofilm, purple algae, starboard higher concentration	4	TW, Bry, Tun, AS, BA, Biofilm, purple algae	4	TW, Bry, Tun, AS, BA, Biofilm, purple algae	4	TW, Bry, Tun, AS, BA, Biofilm, purple algae	4	TW, Bry, Tun, AS, BA, Biofilm, purple algae	Purple Pad	Used squeegee to remove TW, purple pad for everything else	2		3	Scratched in areas, thinning in areas	3
08/06/2010	20.2	Port / SW 30	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	Purple Pad	Mainly used purple but some spots used brown	2		3	peeling at WL, lots of growth above bootstripe	3
08/24/2010	19.3	Starboard / NE 210	3	TW, Bry, Tunicate, BA, Biofilm	3	TW, Bry, Tunicate, BA, Biofilm	3	TW, Bry, Tunicate, BA, Biofilm	3	TW, GA, BA, Biofilm	3	TW, GA, BA, Biofilm	3	TW, GA, BA, Biofilm	Purple Pad		3		4		4
09/16/2010	19.4	Port	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm	4	TW, Bry, Tun, AS, GA, BA, Biofilm; lengthy algae	4	TW, Bry, Tun, AS, GA, BA, Biofilm; lengthy algae	Purple Pad	Used plastic scraper to remove hard growth	1	Diver recommends using purple pad early on in process	3		3
10/06/2010	19.5	Port	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, GA, BA, Biofilm	Purple Pad	used combo of white/purple pad	2	important to use proper tool	4	waterline to about 1 ft down, little flakes/peeling at WL	4
10/26/2010	19.1	Port	3	TW, Bry, AS, BA, Biofilm	3	TW, Bry, AS, BA, Biofilm	3	TW, Bry, AS, BA, Biofilm	3	TW, Bry, AS, BA, Biofilm	3	TW, Bry, AS, BA, Biofilm	3	TW, Bry, AS, GA, BA, Biofilm	Purple Pad	Still peeling on WL but no new peeling. Purple algae in some spots all over boat. Also used scraper and white pad	2	Bottom was a 1.5	3	WL peeling	3

Klear N' Klean - 32' sailboat

Date	Water Temp (C)	Dockside Orientation/Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-Preclean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
06/23/2009	0	Port/South	4	Tun,Bry,BA;small TW(Pinheads), hydroids	4	Tun,Bry,BA;small TW(Pinheads), hydroids	4	Tun,Bry,BA;small TW(Pinheads), hydroids	4	Tun,Bry,BA;small TW(Pinheads), hydroids	4	Tun,Bry,BA;small TW(Pinheads), hydroids	4	Tun,Bry,BA;small TW(Pinheads), hydroids	White Pad	microfiber,terrycloth,carpet all were not grabbing fouling and required multiple swipes:white pad took it off with a bit of effort	4	white pad took a lot of effort;work with supplier to perhaps go to next tool or increase frequency	1	Scraping on keel;missing some paint - may be due to when launched?	1
07/15/2009	27.2	Port/South	3	TW,Bry,Tun,BA	3	TW,Bry,Tun,BA	3	TW,Bry,Tun,BA	3	TW,Bry,Tun,BA	3	TW,Bry,Tun,BA	3	TW,Bry,Tun,BA	Supplier Recommended	Started with microfiber but appeared to be catching on growth,made it hard to use;used terry cloth,worked ok but Alex suggested may want to move to	2	Somewhere between 2 and 3, Alex leaning towards 2	1	Boat appeared to be tied tighter on east dock, with bow facing in (south);diff from last inspection.Lite pink staining in spots along boat	1
08/04/2009	26.9	Port/South	3	BA,Bry,TW (pinheads/few longer ones)	3	BA,Bry,TW (pinheads/few longer ones)	3	Noticed was a nit more heavier on port side,BA,Bry,TW (pinheads/few longer ones)	3	Noticed was a nit more heavier on port side,BA,Bry,TW (pinheads/few longer ones)	3	Noticed was a nit more heavier on port side,BA,Bry,TW (pinheads/few longer ones)	3	Noticed was a nit more heavier on port side,BA,Bry,TW (pinheads/few longer ones)	White Pad	Tried carpet on small section but had to use multiple swipes with heavy pressure:white pad was working,needed to do few more swipes to remove all bryozoans	3	Actually more a 3 on starboard and 4 on Port (Port a little harder to clean)	1	Rudder and waterline area are starting to stain from brown algae	1
08/26/2009	26.2	Port/South	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW	3	Same as I,but not as heavy growth	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW	3	BA,Bry,pinhead TW	White Pad		3	Certain sections yellowing,more fouling so had to press harder,Alex proposed increasing frequency or going to green pad	1	No coating coming off even with medium pressure	1
09/18/2009	25.8	Port/South	3	BA,Bry,pinhead TW (some longer indiv.),hydroids,dark GA (very tacky)	3	BA,Bry,pinhead TW (some longer indiv.),hydroids,dark GA (very tacky)	3	BA,Bry,pinhead TW (some longer indiv.),hydroids,dark GA (very tacky)	3	BA,Bry,pinhead TW (some longer indiv.),hydroids,dark GA (very tacky)	3	BA,Bry,pinhead TW (some longer indiv.),hydroids,dark GA (very tacky)	3	BA,Bry,pinhead TW (some longer indiv.),hydroids,dark GA (very tacky)	White Pad		2		1	Overall good condition	1
10/05/2009	23.1	Port/South	3	Starboard side of hull has more fouling growth;BA, pinhead TW, purple algae starboard rudder impreg in spots	3	Starboard side of hull has more fouling growth;BA, pinhead TW, purple algae starboard rudder impreg in spots	3	BA, pinhead TW,Bry	3	BA, pinhead TW,Bry	3	Starboard side of hull has more fouling growth;BA,pinhead TW,purple algae present,starboard rudder impreg in spots	3	BA, pinhead TW,Bry	White Pad		2	Port side much easier to clean than starboard	1	Starboard side of rudder seems to be ridged;trailing edge of keel paint is thinner, definitely more growth there;noticed a strip going up about 2 ft from keel that is much easier to clean	1
10/26/2009	22.2	Port/South	2	Starboard BA, than port side, lower amt of TW than previous inspections,Heavy BA,Bry	3	Starboard hll has heavier BA growth concent. than port side, lower amt of TW than previous inspections,BA,Bry	3	Starboard hll has heavier BA growth concent. than port side, lower amt of TW than previous inspections,Heavy BA,Bry	3	Starboard hll has heavier BA growth concent. than port side, lower amt of TW than previous inspections,Heavy BA,Bry, TW not as heavy	3	Starboard hll has BA growth concent. than port side, lower amt of TW than previous inspections,BA,Bry	3	Starboard hll has BA growth concent. than port side, lower amt of TW than previous inspections,BA,Bry	White Pad	Microfiber grabbing too much,felt needed too much pressure for terry cloth,so used white pad	2	Variable levels of effort depending on area of boat;ex-port hull easy but port keel hard,rough and smooth areas different to clean	2	Coating integrity good,able to rub hard w/out compromising paint;slick and intact,slight pink discoloration present on starboard forward waterline and other areas of hull	2
11/16/2009	18.5	Port/South	3	BA,pinhead TW,Bry,purple algae	3	BA,pinhead TW,Bry,purple algae	3	BA,pinhead TW,Bry,purple algae, but not as heavy	3	BA,pinhead TW,Bry,purple algae, but not as heavy	3	BA,pinhead TW,Bry,purple algae	3	BA,pinhead TW,Bry,purple algae, but not as heavy	White Pad	blue microfiber- grabbing too much, tried terry cloth-not getting off w/ heavy effort, white pad-worked well	4	purple algae-really impregnated, have to lean into it. Removed everything else, port side slightly easier. 3 ft down from waterline to keel-increase effort	2	lost sheen, still seeing pink in sections. Paint seems unevenly applied	0
12/16/2009	15.8	Port/South	3	Heavy BA/PA,Tun,Bry	3	Heavy BA/PA,Tun,Bry;heavy BA on rudder	3	Lite-med BA;much less on this side,Tun,Bry	3	Heavy BA/PA,Tun,Bry;heavy BA on rudder	2	Heavy BA, GA	2	Heavy BA, GA	Purple Pad	Refer to field sheet	2		2		2
01/08/2010	15.1	Port/South	3	BA/PA,minor bryozoans	3	Very discolored area,impreg where coating worn down,	2	Lite biofilm	3	Purple algae,very lite biofilm,BA impreg on keel,minor bryozoans	3	BA,GA,PA heavy	2	GA,BA,PA	Purple Pad		3		3	Paint coming off in clear silicon strips, small now but very evident at waterline,scratches in paint all over	3
01/27/2010	15.2	Port/South	2	BA, some patches of purple algae	2	BA, some patches of purple algae;rudder med BA growth	1	Very light biofilm	1	Very light biofilm	2	BA and purple algae	1	BA	Purple Pad		2	Minimal pressure	3		3
02/19/2010	17.4	Port/South	3	Heavier concentration of BA,pinhead TW,Bry	3	Heavier concentration of BA,pinhead TW,Bry	3	Pinhead TW,BA,some GA,lighter concentrations of BA on hull	3	Med levels BA,pinhead TW,Bry	3	Heavier concentration of BA,pinhead TW,Bry	3	Med levels BA,pinhead TW,Bry	Purple Pad		3	Keel very easy to clean,but rest of hull variable	3	Peeling at waterline,minor paint scraping at bottom of keel.	3
04/02/2010	18.1	Port/South	3	Purple algae in areas of low to no light (see diver's sheet),centerline and keel	3	Purple algae in areas of low to no light (see diver's sheet),centerline and keel,area in quad w/much heavier BA and biofilm	3	Purple algae in areas of low to no light (see diver's sheet),centerline and keel	3	Purple algae in areas of low to no light (see diver's sheet),centerline and keel;Bry,BA,pinhead TW	3	Bry,BA,pinhead TW	3	Bry,BA,pinhead TW	Purple Pad		2	Almost a 3 starboard aft,just forward of rudder,rudder has more impreg.	3	Peeling at waterline forward,starboard side post-clean noticed peeling on both sides	3
05/04/2010	20.9	Port/South	4	TW (pinhead TW),Bry,Tun,GA hydroids,purple algae	4	TW (pinhead TW),Bry,Tun,GA hydroids,purple algae; starboard keel hardly any growth	4	TW (pinhead TW),Bry,Tun,GA hydroids,purple algae	4	TW (pinhead TW),Bry,Tun,GA hydroids,purple algae	4	TW,Bry,Tun,GA,BA,hydroids	4	TW,Bry,Tun,GA,BA,hydroids	Purple Pad		2	Worked with very light pressure on waterline of boat	3	Peeling forward section on both starboard and port at waterline	3
05/27/2010	21.8	Port/South	3	TW,Bry,Tun,BA,Biofilm,purple algae	3	TW,Bry,Tun,BA,Biofilm,purple algae	3	TW,Bry,Tun,BA,Biofilm,purple algae	3	TW,Bry,Tun,BA,Biofilm,purple algae	3	TW,AS,Tun,BA,GA,Biofilm,purple algae	3	TW,AS,Tun,BA,GA,Biofilm,purple algae	Purple Pad	Suggested using green pad where heavy impreg	3	see field notes	3	peeling along forward waterline section	3
06/17/2010	24.7	Port/South	4	TW,Bry,Tun,BA,Biofilm	4	TW,Bry,Tun,GA,BA,Biofilm	4	TW,Bry,Tun,GA,BA,Biofilm	4	TW,Bry,GA,BA,Biofilm	4	TW,BA,Biofilm	4	TW,Bry,GA,BA,Biofilm	Purple Pad	TC at bow at waterline,purple pad everywhere else	3		4	Removed at forward section WL,rest of hull holding up	4
07/09/2010	21.8	Port/South	4	TW(pinhead),Bry,AS,GA,BA,Biofilm	4	TW(pinhead),Bry,AS,GA,BA,Biofilm	4	TW(pinhead),Bry,AS,GA,BA,Biofilm	4	TW(pinhead),Bry,AS,GA,BA,Biofilm	4	TW(pinhead),GA,BA,Biofilm,purple algae	4	TW(pinhead),GA,BA,Biofilm,purple algae, heavier on this side	Purple Pad		3		3	WL peeling (same as before)	3
07/29/2010	23.5	Port/South	3	TW,Bry,AS,GA,BA,Biofilm	3	TW,Bry,AS,GA,BA,Biofilm	3	TW,Bry,AS,GA,BA,Biofilm	3	TW,Bry,AS,GA,BA,Biofilm	3	Pinhead TW,Bry,GA,BA,Biofilm	3	Pinhead TW,Bry,GA,BA,Biofilm	Purple Pad	Used combo white/purple pad,pad used dep on fouling density/thickness	2		4	Peeling more at WL,almost all way on portside	4
08/19/2010	25.2	Port/South	4	TW,Bry,AS,GA,BA,Biofilm,hydroids	4	TW,Bry,AS,GA,BA,Biofilm,hydroids	4	TW,Bry,AS,GA,BA,Biofilm,hydroids	4	TW,Bry,AS,GA,BA,Biofilm,hydroids	4	TW,Bry,AS,GA,BA,Biofilm,hydroids	4	TW,Bry,AS,GA,BA,Biofilm,hydroids	Purple Pad	Used combo of white and purple pad	2	Hard growth easy to remove but staining getting worse. Can't remove without a tremendous amount of effort	4	still peeling at WL,thinning in other areas	4
09/10/2010	24.2	Port/South	4	Heavy BA impreg, Purple algae	4	Heavy BA impreg, Purple algae	4	Heavy BA impreg, Purple algae	4	Heavy BA impreg, Purple algae	4	Heavy BA impreg, Purple algae	4	Heavy BA impreg, Purple algae	Purple Pad	combo of white and purple pad	2	Not cleaning the peeling parts, portside appears easier	4		5
10/01/2010	22.5	Port/South	3	Bry,AS,BA,Biofilm	3	Bry,AS,BA,Biofilm	3	Bry,AS,BA,Biofilm	3	Bry,AS,BA,Biofilm	3	TW,Bry,AS,GA,BA,Biofilm	3	TW,Bry,AS,GA,BA,Biofilm	Purple Pad	looks like someone wiped down boat	3		4	starboard keel-paint application seems best area, low effort, very smooth	4
11/05/2010	20.6	Port/South	4	TW,Bry,AS,BA,Biofilm	4	TW,Bry,AS,BA,Biofilm	4	TW,Bry,AS,BA,Biofilm	4	TW,Bry,AS,BA,Biofilm	4	TW,Bry,AS,GA,BA,Biofilm	4	TW,Bry,AS,GA,BA,Biofilm	Purple Pad	used scraper for WL, Starboard had heavier growth than port	1	WL with pad rated a 4-5, but a 1 with scraper	3		4

Phase Coat Bare Bottom	Date	Water Temp (C)	Dockside Orientation/Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-PreClean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
	06/23/2009	20.6	Starboard / SW 20	1	Area of discoloration,beginning to peel - look at diagram	1	Discoloration in areas,paint looks thin, various 3" white spots on hull,white spots of discolor on keel.leading and trailing edges show discoloration	1	2'x2' area beginning to peel - look at diagram	1	1.5"x1.5" area beg to peel,2" area w/black showing through	1	Areas of peeling - look at diagram	1	Areas of peeling;rudder.round spots of discoloration	N/A		0		3	Petroleum like texture;comes off in small globules.seemed most issues were at waterline	N/A
	07/14/2009	22	Starboard / SW 20	4	TW,BA,Bry,Tun	4	TW,BA,Bry,Tun	4	TW,BA,Bry,Tun	4	TW,BA,Bry,Tun	4	TW,BA,Bry,Tun	4	TW,BA,Bry,Tun	White Pad	Used plastic scraper first, then used white pad	1	Minimal effort with scraper	1		1
	07/21/2009	22.1	Starboard / SW 20	1	BA	1	BA	1	BA	1	BA	1	BA	1	BA	White Pad	Went ahead and cleaned with carpet and finished off with white pad	2		1		1
Discontinued this paint																						

Proposed	Date	Water Temp (C)	Dockside Orientation/Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-Preclean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating		
	06/23/2009	20.6	Port / NE 200	5	Tun,Bry,TW,BA	5	Tun,Bry,TW impregnation everywhere,BA	5	Tun,Bry,TW impregnation everywhere,BA	5	Tun,Bry,TW impregnation everywhere,BA	5	Tun,Bry,TW impregnation everywhere,BA,long GA along waterline	5	Tun,Bry,TW impregnation everywhere,BA,long GA along waterline	White Pad	Used plastic scraper before using white pad.Tunicates came off easily.still some residual hard growth in certain areas.Tried to use green pad to rudder but began etch.Increase frequency?	2	Alex said almost a 1.5	1	Couldn't see bottom in most areas before cleaning due to growth. 2 areas along keel towards bow with 1/4"x2" long scratches	1		
	07/01/2009	20.7	Port / NE 200	1	Light biofoul and minor emergent hard growth (<1%) random Bry,TW	1	Light biofoul and minor emergent hard growth (<1%) random Bry,TW	1	Light biofoul and minor emergent hard growth (<1%) random Bry,TW	1	Light biofoul and minor emergent hard growth (<1%) random Bry,TW	1	Light biofoul and minor emergent hard growth (<1%) random Bry,TW	1	Light biofoul and minor emergent hard growth (<1%) random Bry,TW	N/A		0		2		N/A		
	07/09/2009	20.6	Port / NE 200	4	Hull covered in algae,Bry,TW	4	Hull covered in algae,Bry,TW	4	Hull covered in algae,Bry,TW	4	Hull covered in algae,Bry,TW	4	Hull covered in algae,Bry,TW;some paint starting to flake off bottom of keel/hull	4	Hull covered in algae,Bry,TW;long seagrass growing on exposed transome waterline,hard growth at waterline	4	Hull covered in algae,Bry,TW;long seagrass growing on exposed transome waterline,hard growth at waterline	White Pad	Used plastic scraper prior to using fabric tool.white pad came off	2	Needed 2 phased cleaning approach	1	after cleaning,coating still slick underneath;bottom of keel,see runs,paint chipping off on keel (3ft from aft end)Coating delaminating,keel's texture is	3
	07/14/2009	21.7	Port / NE 200	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning.Paint flaking off where boat was on blocks	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning.Paint flaking off where boat was on blocks	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning.Paint flaking off where boat was on blocks	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning	2	Mainly algae, some leftover impregnation marks/remnants from last cleaning	White Pad	tried carpet but did not work	1		3	All other areas look good, except for areas on keel and where blocks were;Decision was made to repaint the boat	3
07/24/2009	22	Port / NE 200	3	BA,TW,Bry	3	BA,TW,Bry	3	BA,TW,Bry	3	BA,TW,Bry	3	BA,TW,Bry	3	BA,TW,Bry	3	BA,TW,Bry	Power Tool	Used plastic scraper but not getting everything off,used 28,000th grit power brush on hull and white pad along water line after scraper	1	Eric used white pads at waterline(2 to 4	3	Significant areas of paint peeling,but other others the coating looks good	3	

Discontinued this boat

Date	Water Temp (C)	Dockside Orientation / Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition Pre-clean Rating	Coating Cond - Pre Notes	Coating Condition Post-clean Rating
04/28/2009	18.5	Starboard / NW 110	1		1		1		1		1		1		N/A		0		1	Rough area with some coating missing in QUAds I and III, 1' area on bottom of keel with product not applied in Quad IV, Two 6" area with launch damage, coating thinning in Quad V.	N/A
05/14/2009	21.1	Starboard / NW 110	2		2		2		2		2		2		N/A		0		2	Heavy slime/biofilm layer. Seems that it would come right off with speed. Looks like paint not adhering to metal, like near trim tabs. Areas of coating blemishes noted in 1st inspection still present.	N/A
06/03/2009	19.9	Starboard / NW 110	1	Very light algae growth	1	Very light algae growth	1	Very light algae growth	1	Very clean section. Almost no marine growth (algae) present at all	1		1		N/A		0		1		N/A
06/23/2009	21	Port / SE 290	1		1		1		1		2	Heavier algal slime, GA more towards aft	2	Heavier algal slime, GA more towards aft	Microfiber Cloth	White plume coming off where he lightly touched with cloth, no cleaning on quadrant 1-4	1	Waterline and transome only	1		1
07/14/2009	22.8	Starboard / NW 110	2	BA	2	BA	2	BA	2	Medium level BA	1	Biofilm, impregnations of TW-tiny spots	1	Biofilm, impregnations of TW-tiny spots	Microfiber Cloth		2		1		1
08/06/2009	23.7	Starboard / NW 110	1	BA, longer branching RA along keel	1	BA, longer branching RA along keel	1	BA, longer branching RA along keel	1	BA, longer branching RA along keel	1	BA, longer branching RA along keel	1	BA, longer branching RA along keel	N/A		0		1		1
08/25/2009	21	Starboard / NW 110	3	Bottom of keel has TW growth, possibly due to product failure or poor prep, lighter on shaded side	3	TW	3	TW	3	Small patches of growth on hull, coating around patch in excellent condition, some coating failure where TW impregnating on bow which may be due to friction while boat in use	1	Biofilm	1	Biofilm	N/A		0	Diver recommended not cleaning today, will talk to supplier before cleaning	2	At bow, leading edge has some impregnation of soft growth, algae	N/A
09/02/2009	24.3	Starboard / NW 110	2	Biofilm	2	Biofilm	3	Biofilm, TW impregnation on various areas where paint is thinning	3	Biofilm, TW impregnation on various areas where paint is thinning	1	Biofilm	1	Biofilm	Microfiber Cloth	Used plastic scraper for areas with TW, green and white pad also used on those specific areas. Microfiber used everywhere else	3	Areas where paint worn down was a 3 to 4, all other areas it was a 2	3	Paint worn down at leading edges and where boatyard runners were, not much coating left	3
09/15/2009	22.1	Starboard / NW 110	1		1		1		1		1		1		N/A		0		1	Chipped on thru hull and struts, where runners were looks good as to fouling, but a little rough in texture	N/A
10/07/2009	20.3	Starboard / NW 110	3	TW not as many as port side, Bry, BA	3	TW not as many as port side, Bry, BA	3	TW, Bry, BA	3	TW, Bry, BA	2	BA	2	Very light brown algae only, really clean	Microfiber Cloth	Used plastic scraper on areas where TW (in grooves and boat yard support areas) were, otherwise used blue microfiber for rest of hull	2		1	Photoreactive process evident in areas where direct sunlight, markedly different than areas not in direct sunlight	1
10/27/2009	19.9	Port / SE 290	2	Light to mod biofilm, some TW present on hull/keel	2	Light to mod biofilm, some TW present on hull/keel	2	Light to mod biofilm, some TW present on hull/keel	2	Area where impregnation and biocide loss is very prominent, keel has areas where no coating is present	2	1-2, waterline looks good, only light biofilm	2	1-2, waterline looks good, only light biofilm	N/A	Elected not to clean b/c felt that cleaning may damage coating more and fouling did not appear to impact boating performance	0		3	Large portions of centerline keel has prominent coating loss and is starting to accumulate more fouling and impregnation (look at diver field sheet)	3
11/12/2009	18.2	Port / SE 290	3	BA, Bry, TW where paint is thinning or missing	3	BA, Bry, TW where paint is thinning or missing	3	BA, Bry, TW where paint is thinning or missing	3	BA, Bry, TW where paint is thinning or missing	2	BA, purple algae, Bry	2	BA, purple algae, Bry	White Pad	Used plastic scraper in localized areas of TW growth, waterline to 1st chime used terry cloth on both side, Quads 1-4 used white pad for brown algae and terry cloth for rest of hull	2	Waterline w/terry cloth a 1 to 2 (where coating being removed), rest of boat 2	3	Areas where supports where at boatyard has very little paint left, also paint being removed along waterline and starting to see paint layer below	3
03/11/2010	16.4	Starboard / NW 110	1	Biofilm, Bry	1	Biofilm, Bry	1	Biofilm, Bry	1	Biofilm, Bry	1	Biofilm, Bry	1	Biofilm, Bry	N/A		0		3		N/A
03/29/2010	18.1	Starboard / NW 110	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	2	Biofilm	2	Biofilm, Heavy GA where coating removed, other areas where coating is missing with little to no growth	Terry Cloth		1	Water line only	3	Waterline issue	3
04/27/2010	17.9	Starboard / NW 110	3	AS, Bry, BA, Biofilm	3	AS, Bry, BA, Biofilm	3	AS, Bry, BA, Biofilm	3	AS, Bry, BA, Biofilm	3	AS, GA, Biofilm	3	AS, GA, Biofilm	Purple Pad		2	Water line only	3		3
05/10/2010	19.7	Starboard / NW 110	4	AS, Bry, BA, Tunicate, Biofilm	4	AS, Bry, BA, Tunicate, Biofilm, TW	4	AS, Bry, BA, Tunicate, Biofilm, TW	4	AS, Bry, BA, Tunicate, Biofilm, TW	4	AS, BA, Biofilm	4	AS, BA, GA, Biofilm, forward aft heavy soft growth, aft very light patchy growth	White Pad	Used thin white pad for entire boat	3		3		3
06/01/2010	20.5	Starboard / NW 110	3	AS, Bry, BA, Biofilm	3	AS, Bry, BA, Biofilm	3	AS, Bry, BA, Biofilm	3	AS, Bry, BA, Biofilm	4	AS, GA, BA, Biofilm	4	AS, GA, BA, Biofilm	Terry Cloth	Used plastic scraper on areas where paint removed (bottom of keel, waterline, around thru hulls)	3		3		3
06/22/2010	20.3	Starboard / NW 110	2	Bry, BA, Biofilm	2	BA, Biofilm	2	Bry, BA, Biofilm	1	Bry, BA, Biofilm	2	GA, BA, Biofilm	2	GA, BA, Biofilm	White Pad	TC at WL, starboard side. Used white pad for certain areas of heavy growth where paint thinning badly or is removed, esp on Port side	2	Water line only	3	Missing from WL	3
07/13/2010	20	Starboard / NW 110	2	AS, BA, GA	2	AS, BA, GA	2	AS, BA, GA	2	AS, BA, GA	3	AS, BA, GA	3	AS, BA, GA	White Pad	Lite fouling, areas of thicker fouling but not a whole lot to do	2	Water line only	4	Coating missing at WL, thinning at other areas	4
08/02/2010	19.8	Starboard / NW 110	3	Bry, AS, BA, Biofilm	3	Bry, AS, BA, Biofilm	3	Bry, AS, BA, Biofilm	3	Bry, AS, BA, Biofilm (Bryozoans on top of soft growth, very easy to remove)	3	AS, GA, BA (very clean areas on WL)	3	AS, GA, BA (very clean areas on WL)	White Pad	Green pad at WL where paint missing	3	Cleaned Water line and only spot cleaned rest of hull, WL very ablativ, some rougher areas	3		3
08/23/2010	20.6	Starboard / NW 110	3	Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, BA, Biofilm	2	BA, Biofilm, GA	2	BA, Biofilm, GA	White Pad	Cleaned part of the WL	0		4		4
09/16/2010	18.7	Port / SE 290	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, GA, Biofilm	2	BA, GA, Biofilm	White Pad		2	Water line only	3		3
10/06/2010	19.6	Port / SE 290	3	BA, Biofilm, TW, Bry	3	BA, Biofilm	3	BA, Biofilm	3	BA, Biofilm	3	GA, BA, Biofilm	3	GA, BA, Biofilm	N/A		0	Growth not thick, comes off w/hand, think that if he goes under way, most will come off	4		N/A
11/03/2010	19.2	Port / SE 290	4	TW, AS, BA, Biofilm	4	TW, AS, BA, Biofilm	4	TW, AS, BA, Biofilm	4	TW, AS, BA, Biofilm	4	TW, GA, BA, Biofilm	4	TW, GA, BA, Biofilm	Purple Pad	Used terry cloth for topical aesthetics	1	Cleaned WL only	3	Diver wants boat use logs to see if any performance issues are experienced by owner during recent use (increased drag and/or maneuverability)	3

Sunwave	Date	Water Temp (C)	Dockside Orientation / Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-Preclean Rating	Coating Cond - Pre Notes	Coating Condition-Postclean Rating
	08/25/2009	22.1	Starboard / SW 20	0		0		0		0		0		0		N/A		0		1		N/A
	09/15/2009	22.1	Starboard / SW 20	1		1		1		1		1		1		N/A		0		1		N/A
	10/07/2009	19.9	Starboard / SW 20	1		3	Very few patches of TW and some bryozoans present in this quadrant only; decided not to clean	1		1		1		1		N/A		0		1		1
	10/27/2009	19.9	Starboard / SW 20	3	Biofilm, Bry, TW	3	Biofilm, Bry, TW	3	Biofilm, Bry, TW, port rudder very clean	3	Biofilm, Bry, TW present, one portion of port hull very clean	3	Biofilm, Bry, TW	3	Biofilm, Bry, TW	White Pad	Started w/micro but grabbing too much, terry cloth appeared to be taking off coating, used white pad lightly and didn't take off coating	2		1	Condition looks good	1
	11/17/2009	17.6	Starboard / SW 20	2	BA	3	BA, purple algae, TW, Bry	2	BA, purple algae	2	BA	2	BA	2	forward section very clean compared to rest	Microfiber Cloth		2	almost a 3 where algae bases were attached more firmly	1		1
	12/14/2009	15.7	Starboard / SW 20	2	BA, purple algae	2	BA, purple algae	2	BA, purple algae	2	BA, purple algae	2	BA, purple algae	2	BA, purple algae	Microfiber Cloth		2	worked well, in some spots had long green algae that had to focus on scrubbing but all relatively easy	1	staining at waterline of algae in aft section	1
	01/05/2010	15.4	Starboard / SW 20	2	Moderate BA	1	Very lite BA	3	Heavier BA, rudder heavier	3	Heavier BA, rudder heavier	2	Moderate BA	3	Moderate to heavy BA	Microfiber Cloth	Cleaned entire boat, worked well	2		1	Leading edge bow seems to be looking a little thinner	1
	01/28/2010	15.7	Starboard / SW 20	3	BA, Purple algae	3	BA, Purple algae	3	BA, Purple algae	3	BA, Purple algae	3	BA, Purple algae	3	BA, Purple algae	Microfiber Cloth	Leading edge of rudder/keel, starboard aft-purple algae not coming off. Will contact supplier to see about using white pad on these areas	2		2		2
	02/16/2010	16.5	Starboard / SW 20	1	BA, thin biofilm	1	BA, thin biofilm	1	BA, thin biofilm, black looking algae	1	BA, thin biofilm, black looking algae	1	BA, thin biofilm, black looking algae	1	BA, thin biofilm, black looking algae	Microfiber Cloth	Used thruout but difficult at waterline	2	Some areas on stern impreg and hard to get off	2	Coating seemed very soft	2
	03/11/2010	16.3	Starboard / SW 20	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm; thicker at waterline	2	BA, Biofilm; thicker at waterline	White Pad	Terry cloth for quads 1-4, white pad waterline	3	2 quads 1 thru 4, 3 waterline	3	Coating thinning at waterline, sections where felling down to the primer level, porous in some on bottom that allows algae	3
	03/29/2010	17.3	Starboard / SW 20	2	BA and biofilm, some patchy areas of GA present	2	BA and biofilm, some patchy areas of GA present	2	BA and biofilm, some patchy areas of GA present	2	BA and biofilm, some patchy areas of GA present	2	BA and biofilm	2	BA and biofilm	White Pad	Combo of terry and white pad, white pad only at water line	3	Very patchy, some areas a 1, other areas almost a 5	1		3
	04/27/2010	17.1	Port / NE 200	3	As, BA, BT, Biofilm	3	As, BA, BT, Biofilm	3	As, BA, BT, Biofilm	3	AS, BA, BT, Biofouling	3	AS, BA, Biofouling	3	AS, BA, Biofouling	White Pad		2	Some areas a little more impregnated (closer to a 3) but overall cleaning a 2	1		2
	05/10/2010	19.2	Starboard / SW 20	3	Bry (very small), AS, BA	3	AS, BA	3	AS, BA	3	AS, BA	3	AS, BA	3	AS, BA	Purple Pad		3		2		2
	06/01/2010	19.1	Starboard / SW 20	3	Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	BA, Biofilm	3	GA, BA, Biofilm	3	GA, BA, Biofilm	Microfiber Cloth		3		3		3
	06/22/2010	20.9	Starboard / SW 20	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	GA, BA, Biofilm	2	GA, BA, Biofilm	Terry Cloth	Majority of boat TC, white pad where blocks were, plastic scraper where TW were on block areas	2		4	Coating appears to be missing in some sections (like rudder), thinning in others (like waterline)	4
	07/13/2010	19	Starboard / SW 20	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, Bry, BA, Biofilm	3	TW, GA, BA, Biofilm	3	TW, GA, BA, Biofilm	Purple Pad		2		3		4
	08/02/2010	19.9	Starboard / SW 20	2	TW, BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	3	BA, Biofilm	White Pad		3		3		3
	08/23/2010	18.9	Starboard / SW 20	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm, Bryozoan	3	TW, GA, BA, Biofilm	3	GA, BA, Biofilm	White Pad	White pad throughout, plastic scraper on selective spots	3	bow WL (both sides) slightly harder to clean, thinning	3	Coating thinning in areas, where coating seems softer. Otherwise same as last inspection	3
	09/13/2010	19.6	Starboard / SW 20	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, GA, BA, Biofilm	3	TW, AS, GA, BA, Biofilm	Purple Pad	Combo pf purple/white pad	3		3		3
10/06/2010	19.3	Starboard / SW 20	3	TW, BA	3	TW, BA	3	TW, BA, big patch of TW	3	TW, BA	3	TW, BA, Biofilm	4	TW, BA, Biofilm	Purple Pad	scraper to remove TW along waterline, areas where paint very thin, purple pad used on overall hull	0	very smooth, performance should be good, decided not to clean	3			N/A
11/09/2010	18.2	Starboard / SW 20	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	4	TW, AS, GA	4	TW, AS, GA	White Pad for bottom, purple pad for WL	used a scraper to remove TW growth as well	2		4	peeling on starboard side WL, patches TW all over hull	4	

Ecominder	Date	Water Temp (C)	Dockside Orientation /Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition Pre-clean Rating	Coating Cond - Pre Notes	Coating Cond-Postclean Rating
	05/14/2009	20.5	Starboard / NE 200	0		0		0		0		0		0		N/A		0		1	Paint coming off metal struts, Spider webbing/very small paint blisters (around 40-50) on various parts of the hull, fouling wise, hull is very good	N/A
	06/03/2009	20.2	Starboard / NE 200	1	light algae	1		1		1		1		1		N/A		0		1	Minor, very small spots of paint blistering in Quad I; Minor paint blistering with white area that has popped in Quad IV	N/A
	06/23/2009	20.6	Starboard / NE 200	1		1		1		1		1		1		N/A		0		1	Area along keel where paint is cracking, 2" up from stern, centerline in Quad II	N/A
	07/14/2009	21.9	Starboard / NE 200	1	BA	1	BA	1	BA	1	BA	1	BA	1	BA	N/A		0		1		N/A
	07/30/2009	23.8	Starboard / NE 200	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	2	Biofilm	2	Biofilm	N/A		0		1		1
	08/25/2009	22.2	Starboard / NE 200	2	BA, biofilm	2	BA, biofilm, more growth on aft.	2	BA, biofilm, more growth on aft.	0	BA, biofilm	2	Moderate biofilm with minor bubbles on waterline, transome waterline has heavier fouling growth	2	Moderate biofilm with minor bubbles on waterline, transome waterline has heavier fouling growth	Terry Cloth	Worked well, though paint appears to be coming off on cloth, Used white pad for transom and waterline aft	2	Water line only	1		1
	09/15/2009	22.4	Starboard / NE 200	1		1		1		1		1		1		N/A		0		1		N/A
	10/07/2009	19.9	Starboard / NE 200	1		1	TW where boatyard block along keel	0	TW where boatyard block along keel	1		2		2		N/A	Used plastic scraper only on tubeworms where boatyard block were along keel	0		1	Cracking in paint along keel aft section	1
	10/27/2009	20.1	Starboard / NE 200	2	BA	2	BA	2	BA	2	BA	2	BA	1	BA	Terry Cloth	Started with microfiber, used terry cloth	1	Water line only	1	Coating appears to be in good condition	1
	11/17/2009	17.9	Starboard / NE 200	1	Biofilm	2	Biofilm, GA	2	Biofilm, GA	1	Biofilm	2	Biofilm, GA	2	Biofilm, GA	Microfiber Cloth	blue microfiber seems to be sliding over slime, switched to terry cloth- seems to be working well	1	Partial cleaning; cleaned quads 2,3,5,6	1	shaft/prop area a little thicker	1
	12/14/2009	15.6	Starboard / NE 200	1	light/med algae	1	light/med algae	1	light/med algae	1	light/med algae	2	GA	2	GA	Microfiber Cloth	terry cloth and microfiber, aft=harder to clean, white pad=aft section where longer green algae	2	2 for most of boat, white pad= aft section	2		2
	01/05/2010	15.5	Starboard / NE 200	1	BA	1	BA	1	BA	1	BA	2	BA	2	BA	Terry Cloth		1	Water line only	1		1
	01/28/2010	15.9	Starboard / NE 200	2	BA, biofilm	2	BA, biofilm	2	BA, biofilm	2	BA, biofilm	3	BA, GA	3	BA, GA	Terry Cloth		2		2		2
	02/16/2010	16.7	Starboard / NE 200	1	BA, Biofilm	1	BA, Biofilm	1	BA, Biofilm	1	BA, Biofilm	2	BA, Biofilm, thick biofilm increases towards aft section	2	BA, Biofilm, thick biofilm increases towards aft section	White Pad	Heavy green algae at waterline both stern and aft, required lots of scrubbing	3	3 on waterline around algae areas, 1 on bottom	2		2
	03/11/2010	16.3	Starboard / NE 200	2	Biofilm, BA	2	Biofilm, BA; more fouling at very back aft section	2	Biofilm, BA; more fouling at very back of aft section	3	Biofilm, BA	3	GA, BA, thicker green algae in sunny area	3	GA, BA, thicker green algae in sunny area	White Pad	Used white for aft section/transom. Heavier algae, terry cloth everywhere else	3	3 at waterline, 2 rest of boat	2		2
	03/29/2010	17.3	Starboard / NE 200	1	BA	1	BA	1	BA	1	BA	2	BA and GA on transom and few areas on waterline, esp forward	2	BA and GA on transom and few areas on waterline, esp forward	Terry Cloth	Used mix of terry and microfiber	3	Water line only, some spots were a 3 other spots a 2	1		1
	04/27/2010	17.2	Starboard / NE 200	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	2	Biofilm, GA	2	Biofilm, GA	Terry Cloth		2	Water line only	1		1
	05/10/2010	19.2	Starboard / NE 200	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, GA, BA (on sunnyside), Biofilm	Terry Cloth		1	Cleaned waterline and transom lightly only	1		2
	06/01/2010	18.8	Starboard / NE 200	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	2	GA, BA, Biofilm	2	GA, BA, Biofilm	Microfiber Cloth	spot cleaned with white pad on aft section	3	Water line only	3		3
06/22/2010	21.2	Starboard / NE 200	1	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	1	BA, Biofilm	2	GA, BA, Biofilm	2	GA, BA, Biofilm	Terry Cloth	Primarily TC, white pad for small sections aft at WL	2	Partial cleaning only, water line and aft sections where heavier growth	2	Coating thinning in aft section	2	
07/13/2010	18.9	Starboard / NE 200	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	3	GA, BA, Biofilm	3	GA, BA, Biofilm	Microfiber Cloth	Used microfiber sponge on WL only, white pad in aft areas (metals), spot cleaned with micro sponge on quads 1-4	2	Water line only	2		2	
08/02/2010	20	Starboard / NE 200	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	2	GA, BA, Biofilm (minor on aft WL, heavier on bow)	3	GA, BA, Biofilm (heavier growth mid-section to aft)	Terry Cloth	Combo terry and white pad, white pad aft section only where heavy algae	1	Water line only	1		1	
08/23/2010	19	Starboard / NE 200	2	BA, Biofilm	2	BA, Biofilm, Bry, TW (Bry and TW only along keel)	2	BA, Biofilm, TW (TW only on localized areas)	2	BA, Biofilm, TW (TW only on localized areas)	2	GA, BA, Biofilm	2	GA, BA, Biofilm	White Pad	Terry cloth spot clean algae on other areas, esp on WL, white pad only on specific areas with long GA	2	TW sporadically on hull so cleaned with white pad and plastic scraper on those areas	2		2	
09/13/2010	19.6	Starboard / NE 200	1	BA, Biofilm	1	BA, Biofilm	1	BA, Biofilm	1	BA, Biofilm	2	GA, BA, Biofilm	2	BA, GA, Biofilm	Carpet	Combo of carpet and terry towel; portside WL/transom use small section with white pad	1	Water line only	1	trim tabs, rudders, struts missing paint	1	
10/06/2010	19.5	Starboard / NE 200	1	TW, BA (TW growth around thru hulls)	1	TW, BA (transom BA, GA, TW but not as heavy as last inspection)	1	TW, BA (transom BA, GA, TW but not as heavy as last inspection)	1	TW, BA (minor areas under chime)	2	GA, BA	3	GA, BA (GA minor)	White Pad	plastic scraper for sporadic TW	1		1	a little wear on transom keel, overall great condition	1	
11/03/2010	18.9	Starboard / NE 200	2	TW, AS, Biofilm	2	TW, AS, Biofilm	2	TW, AS, Biofilm	2	TW, AS, Biofilm	3	TW, AS, Biofilm	3	TW, AS, Biofilm	White Pad	White pad used for algae, terrycloth for aesthetics	1		2	Some thinning at WL, coating in overall good condition	2	

Date	Water Temp (C)	Dockside Orientation/ Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition-Pre-clean Rating	Coating Cond - Pre Notes	Coating Condition-Post-clean Rating
04/21/2009	18.6	Starboard / NW 150	0		0		0		0		0		0		N/A		0		1	14-16" area on keel did not have enough coating applied where it sat on block at yard. Area is beginning to thin.	N/A
07/14/2009	21.7	Starboard / NW 150	1	Biofilm	1	Biofilm	1	Biofilm	1	Very light biofilm	1	Biofilm	1	Biofilm	N/A		0		1	4"x2" area of paint chipping in Quad I; rough area 3-4"x5" remnants of wax paper; small 3.5" round paint blemish in Quad III; 2.5"x1.5" area where coating was scraped off during launch in Quad IV; 1" paint chip 2" forward of STB aft waterline; 4"x2" area of chipping STB forward waterline in Quad V	N/A
08/04/2009	23.6	Starboard / NW 150	1	Very light silting	1	Very light silting	1	Very light silting	1	Very light silting	1	Very light silting	1	Very light silting	N/A		0		1	1 2"x10" gouge in hull near keel (there before) in Quad I; 1 2"x10" gouge in hull near keel (there before) in Quad IV.	N/A
08/25/2009	21.7	Port / SE 330	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	N/A		0		1	Bubble-like along transom, similar to what occurred on panels, stops about 5ft from bow along waterline	1
09/15/2009	21.7	Port / SE 330	1		1		1		1		1		1		N/A		0		1		N/A
10/07/2009	19.8	Port / SE 330	1		1		1		1		2	Biofilm heavier at waterline; more on starboard than port, eps along chimes	2	Biofilm heavier at waterline	N/A		0		1		N/A
10/27/2009	19.9	Port / SE 330	2	Heavy BA/biofilm present	2	Heavy BA/biofilm present	2	Heavy BA/biofilm present	2	Heavy BA/biofilm present	2	Heavy BA/biofilm present	2	Heavy BA/biofilm present	N/A		0		1		N/A
11/17/2009	17	Port / SE 330	2	Heavy BA/biofilm, heavier on starboard side	2	Heavy BA/biofilm, heavier on starboard side	2	heavy brown algae/biofilm	2	heavy brown algae/biofilm	2	Heavy BA/biofilm, heavier on starboard side	2	heavy brown algae/biofilm	Carpet	microfiber leaves slime behind, switched to terry cloth. Terry cloth worked well on areas where fouling was light, but smeared where fouling was heavier. Switched to carpet. Carpet worked well	2		1	looks like huge bubbles on top of paint	1
12/14/2009	15.3	Port / SE 330	2	Heavy BA/biofilm, heavier on starboard side	2	Heavy BA/biofilm, heavier on starboard side	2	BA, biofilm	2	BA, biofilm	2	Heavy BA/biofilm, heavier on starboard side	2	BA, biofilm	Microfiber Cloth		3	little harder on starboard side, brown algae makes it slick=scrub harder, port=easier, paint ablated onto microfiber 2-2.5	2		2
01/05/2010	15	Port / SE 330	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	1	Biofilm	N/A		0		1	Paint chipping off struts, rudders, trim tabs	N/A
01/28/2010	15.1	Starboard / NW 150	2	BA, AS	2	BA, AS	2	BA, AS	2	BA, AS	2	BA, AS	2	BA, AS	Microfiber Cloth		1	Waterline only	1		1
02/16/2010	16.1	Starboard / NW 150	2	Biofilm	2	Biofilm	2	Biofilm	2	Biofilm	2	Biofilm	2	Biofilm	Terry Cloth		2	Fairly easy to clean	1	small paint chip on chime	1
03/11/2010	15.8	Starboard / NW 150	2	BA, GA	2	BA	1	BA	2	BA, GA	2	BA	2	BA, GA	Microfiber Cloth		1	Slightly harder at waterline and port side	2	Forward bow, along keel scratches, looks like he hit something	2
03/30/2010	17.1	Starboard / NW 150	1	Biofilm very minor, GA and BA	1	Biofilm very minor, GA and BA	1	Biofilm very minor, GA and BA	1	Biofilm very minor, GA and BA	2	Biofilm very minor, GA and BA	1	Biofilm very minor, GA and BA	N/A		0		1	Small area of coating missing on starboard bow area	N/A
04/27/2010	16.4	Port / SE 330	2	Biofilm	2	Biofilm	2	Biofilm	2	Biofilm	2	Biofilm	2	Biofilm	Terry Cloth	Used white pad for particular areas	1		1		1
05/11/2010	18.4	Starboard / NW 150	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	Terry Cloth	Lightly wiping waterline and spot cleaning sections in quads 1-4 that have thicker growth	1		1		1
06/01/2010	18.4	Port / SE 330	2	BA and biofilm	2	BA and biofilm	2	BA and biofilm	2	BA and biofilm	2	BA and biofilm	2	BA and biofilm	Terry Cloth		1	slime a little hard to get off with terry cloth	2		2
06/22/2010	22.1	Starboard / NW 150	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	GA, BA, Biofilm	2	GA, BA, Biofilm	Terry Cloth		2	Water Line Only - Partial cleaning, used on waterline and spot cleaning only	2		2
07/13/2010	18.6	Starboard / NW 150	2	BA, Biofilm	2	BA, Biofilm	2	BA, GA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, GA, Biofilm	Terry Cloth		1	Waterline only	2		2
08/06/2010	20.1	Port / SE 330	1	BA, Biofilm	1	BA, Biofilm	1	BA, Biofilm	1	BA, Biofilm	2	GA, BA, Biofilm	2	GA, BA, Biofilm	Terry Cloth		1	Waterline only	2		2
08/24/2010	19.1	Starboard / NW 150	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	2	BA, Biofilm	3	GA, BA, Biofilm (fouling heavier here)	2	GA, BA, Biofilm	Terry Cloth		1		2		3
09/14/2010	19.4	Starboard / NW 150	1	AS, BA, Biofilm	1	AS, BA, Biofilm	1	AS, BA, Biofilm	1	AS, BA, Biofilm	2	AS, GA, BA, Biofilm	2	AS, GA, BA, Biofilm	Carpet		2	Forward section waterline only	1		1
10/06/2010	19.2	Starboard / NW 150	2	BA	2	BA	2	BA	2	BA	2	BA	3	BA, GA	Terry Cloth		2	Partial cleaning, WL only	2		2
10/26/2010	19	Starboard / NW 150	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, BA, Biofilm	2	AS, GA, BA, Biofilm	2	AS, GA, BA, Biofilm, heavier on this quad due to positioning	Terry Cloth		1	WL only	2		2

Seaguard HMF

Date	Water Temp (C)	Dockside Orientation/ Degree Heading	Pre-Clean FGR - I	I - Notes	Pre-Clean FGR - II	II - Notes	Pre-Clean FGR - III	III - Notes	Pre-Clean FGR - IV	IV - Notes	Pre-Clean FGR - V	V - Notes	Pre-Clean FGR - VI	VI - Notes	Cleaning Tool	Tool Notes	Cleaning Effort Rating	Cleaning Effort Notes	Coating Condition- PreClean Rating	Coating Cond - Pre Notes	Coating Condition- Postclean Rating
04/21/2009	18.7	Starboard/ SW 30	1	Scratches on area where vessel was in sling. Discoloration or paint from slings	1	Area of paint scratches; additional area of rough square area where good coating where vessel was sitting at yard	1	1-5' area on centerline of hull that has scratches, gouges out of paint	1		1		1		N/A		0		1		N/A
05/14/2009	20.3	Starboard/ SW 30	1	Two 3/4 in areas of chipping where boat slings were	1		1		1		1		1		N/A		0		2	Areas noted on last visit still visible. brown algal slime present	N/A
06/03/2009	20	Starboard/ SW 30	2		3	Did not clean, heavy biofilm, brownish algae only that wiped off with fingertip.	3	Did not clean, heavy biofilm, brownish algae only that wiped off with fingertip.	2		2		2		N/A	Diver recommended not cleaning this time, perhaps on next inspection	0		1		N/A
06/23/2009	20.5	Starboard/ SW 30	1		1	Individual branching red algae present, few individuals	1		1		1	Towards aft black algal slime a little thicker	1	Towards aft black algal slime a little thicker	N/A		0		1		N/A
07/14/2009	21.7	Starboard/ SW 30	2	BA, TW (one individual)	2	6'x3' area of worm coral growth just aft of top of keel, starboard side. some worm coral growth on strut/between strut and rudder on hull	2		2		2	8' area of paint scraped off at waterline, bow area	2		Microfiber Cloth		1	Came off easily with microfiber cloth	1	Bow damage and leading edge ~4" below waterline and 8" above (photos taken)	1
08/25/2009	22	Starboard/ SW 30	1	Some damage to coating possibly from blocks or launch	1		1		1	1/2'x3' scrape on centerline of bow plus one small paint chip to right of scrape line. looks new	1		1	Very light biofilm with some bubbling	N/A		0		1		N/A
09/15/2009	21.2	Port / NE 210	1	Algal slime present	1	Algal slime present, TW on keel	1	Algal slime present, TW on keel	1	Algal slime present	1	Algal slime	1	Algal slime	Microfiber Cloth		1	Cleaned keel area only, where TW were present (no other parts of hull were cleaned)	1	Crack observed along strut, looks to be underneath paint	1
10/07/2009	19.7	Starboard/ SW 30	3	Light/med biofilm, TW starting (pinheads) but very patchy	3	Light/med biofilm, TW starting (pinheads) but very patchy. Thicker TW towards aft, about 2" TW on lower part of keel	3	Light/med biofilm, TW starting (pinheads) but very patchy. Thicker TW towards aft, about 2" TW on lower part of keel	3	Light/med biofilm, TW starting (pinheads) but very patchy	3	Light/med biofilm, TW starting (pinheads) but very patchy	3	Light/med biofilm, TW starting (pinheads) but very patchy but thicker along waterline	Microfiber Cloth	Used blue microfiber for entire hull, used plastic scraper on patchy sections of the larger tube worms as necessary	2		1	One small (tiny) paint chip missing on aft of keel	1
10/27/2009	19.9	Starboard/ SW 30	2	BA, TW	2	BA, TW	2	BA, TW	2	BA, TW	2	BA, TW	2	BA, TW	Microfiber Cloth		2	Some areas super easy to clean so a 1, but overall effort was a 2	1	Some areas TW leaving etchings that can't be cleaned off, mostly on edges. concerned about rubbing too hard and removing coating	1
11/17/2009	17.1	Starboard/ SW 30	3	BA, TW, getting thicker as move towards bow	4	BA, TW, mainly in this quadrant, fouled more aft	3	BA, TW, fouled more aft	3	BA, TW, getting thicker as move towards bow	4	BA, TW, mainly in this quadrant, bigger tw aft	3	BA, TW, getting thicker as move towards bow	Microfiber Cloth	blue microfiber worked well, used scraper for areas with larger tw	3	easy to wipe off algae but needed to use scraper to remove tw	1		1
12/14/2009	15.6	Starboard/ SW 30	3	Biofilm	3	Biofilm	3	Biofilm	3	Biofilm	3	Biofilm	3	Biofilm	Microfiber Cloth	terry cloth at waterline, microfiber on other 4 quads, plastic scraper for localized areas of larger tw, random all over the place	3	Rolf noted pretty hard to get waterline completely clean, in spots harder to get purple algae	1	patches in hull where paint is pretty rough, ablating pretty heavily onto tows	2
01/05/2010	14.7	Starboard/ SW 30	2	Very lite BA	2	Very lite BA, rudder heavy BA	3	Med to heavy BA	3	Med to heavy BA	2	BA	3	BA	White Pad	Coating abrasive, coming off on pad	2		1	Very coarse rough surface, pigment is ok, but biocide seems to have leached out, not effective anymore	2
01/28/2010	15.2	Starboard/ SW 30	3	Heavy BA, AS, areas that have thinned are rough and harder to clean	3	Heavy BA, AS, areas that have thinned are rough and harder to clean	3	Heavy AS	3	Heavy AS	3	Heavy BA, AS, areas that have thinned are rough and harder to clean	3	Heavy BA, AS, areas that have thinned are rough and harder to clean	White Pad	Used plastic scraper for patches of TW	2	Still some purple algae left that was impregnated	2	Coating very uneven, biocide greatly reduced, pigment still good though	2
02/16/2010	16.2	Starboard/ NE 210	2	Heavy biofilm, BA	2	Heavy biofilm, BA	3	Heavy biofilm, BA, small TW near WL	2	Heavy biofilm, BA	2	Heavy biofilm, BA	2	Heavy biofilm, BA	White Pad		2		2		2
03/11/2010	16.2	Starboard/ SW 30	2	Biofilm, BA	2	Biofilm, BA	2	Biofilm, BA	2	Biofilm, BA	2	Biofilm, BA	2	Biofilm, BA	Terry Cloth		2		2	Paint chipping at waterline. Quad 2-2'x3" paint chip on lower starboard side of rudder. Blisters developing everywhere	3
03/30/2010	17.2	Starboard/ SW 30	3	BA and biofilm, heavier on SB side	3	BA and biofilm, heavier on SB side	3	BA and biofilm, lighter concent. on port, heavier BA on rudder	3	BA and biofilm, lighter concent. on port, heavier BA on rudder	2	BA and Biofilm	2	BA and Biofilm	N/A	Decided to not clean until spoke to coating supplier	0		3	Coating biocide properties seem to have depleted. Very patchy and inconsistent coating, pigment present but growth indicates biocide not effective	N/A
04/27/2010	16.5	Starboard/ SW 30	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	Purple Pad	Used combination of green, purple and brown pads in order to prevent sloughing as much as possible	2	Purple pad at waterline, in areas really impreg gave a 2 to 3, used white pad for rest of boat gave 1 to 2	3	Coating has been depleted severely. Heavily impreg/fouled. Uneven wear so increases patchiness	3
05/11/2010	18.5	Starboard/ SW 30	3	TW, AS, BA	3	TW, AS, BA	3	TW, AS, BA	3	TW, AS, BA	3	TW, AS, Biofilm	3	TW, AS, BA	White Pad	Used thin white pad, worked great with little effort	1		3	Biocide appears to have been depleted, starboard waterline new scratch on forward section.	3
06/01/2010	18.6	Starboard/ SW 30	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	White Pad		2		2		3
06/22/2010	21.9	Starboard/ SW 30	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	White Pad	Plastic scraper for TW, white pad for all else	2		2		3
07/13/2010	18.8	Port/ NE 210	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	White Pad	Used plastic scraper for TW, white pad for everything else	2		3	Quad 1 has 4" area paint missing, 3" chipped off starboard side of rudder, WL chipped at starboard	3
08/06/2010	20.2	Port/ NE 210	2	As, BA, Biofilm	2	As, BA, Biofilm	1	As, BA, Biofilm	2	As, BA, Biofilm	2	As, BA, Biofilm	2	As, BA, Biofilm	White Pad	Combo white/purple pad for impreg/purple algae	2	No hard fouling present	3	Coating ablating off, but appears to have stabilized since last 2 inspections	3
08/24/2010	18.8	Starboard/ SW 30	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	3	TW, BA, Biofilm	White Pad	Used plastic scraper for hard growth areas only	3		3		4
09/22/2010	17.8	Port/ NE 210	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	3	TW, AS, BA, Biofilm	Purple Pad						
10/06/2010	19.5	Port/ NE 210	4	TW, BA, Biofilm	3	TW, BA, Biofilm	4	TW, BA, Biofilm	3	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	Purple Pad	just used scraper, and spot cleaned with pad	3	Noticed path ablating off, so just used scraper to remove TW and did nothing else	3		3
10/26/2010	19.1	Port/ NE 210	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	4	TW, BA, Biofilm	Metal Scraper	Scraper used to get TW off, coating there but not active. Not repelling hard growth, couldn't clean otherwise, b/c very abrasive	3		3		3

Experimental Metal Free