











**Appendix 4 - Quality Assurance Inspection Form – Surface Preparation: Conductivity Log**

SHEET: \_\_\_ of \_\_\_

NAME & HULL #: \_\_\_\_\_ CONTRACT/TASK ORDER/CLIN/TWD: \_\_\_\_\_

LOCATION OR TANK: \_\_\_\_\_ WORK ITEM: \_\_\_\_\_

REQ'T DOCUMENT: \_\_\_\_\_ FY: \_\_\_\_\_ TABLE: \_\_\_\_\_ LINE: \_\_\_\_\_ COLUMN: \_\_\_\_\_ (I)  (V)  (G)  (N/A)

CONTRACTOR: PRIME: \_\_\_\_\_ SUB: \_\_\_\_\_ NAVAL FACILITY: \_\_\_\_\_

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QA Equip No. from App. 2	Chloride/ Conductivity Reading µg/cm <sup>2</sup> <input type="checkbox"/> µS/cm <input type="checkbox"/>	Area/Location	QA Equip No. from App. 2	Chloride/ Conductivity Reading µg/cm <sup>2</sup> <input type="checkbox"/> µS/cm <input type="checkbox"/>	Area/Location
Sat <input type="checkbox"/> Unsat <input type="checkbox"/>		(I) Quality Assurance Inspector Signature & Date <sup>[1]</sup> :		(G) Quality Assurance Inspector Signature & Date <sup>[1]</sup> :	
Remarks (continue on back if needed) <input type="checkbox"/> See back for Continuation:					

<sup>[1]</sup> Signature certifies, based on personal observation, that the data entered above is complete and accurate. Signature includes at least first initial, last name, badge/employee number, or inspector certification number, and date.

<sup>[2]</sup> For electronic equipment that accumulates information in batches and self averages, it is acceptable to enter only the average of the readings for each spot.



**Appendix 6 - Quality Assurance Inspection Form – Preparation & Anti-Corrosive**

SHEET: \_\_\_ of \_\_\_

NAME & HULL #: \_\_\_\_\_ CONTRACT/TASK ORDER/CLIN/TWD: \_\_\_\_\_

LOCATION OR TANK: \_\_\_\_\_ WORK ITEM: \_\_\_\_\_

REQ'T DOCUMENT: \_\_\_\_\_ FY: \_\_\_\_\_ TABLE: \_\_\_\_\_ LINE: \_\_\_\_\_ COLUMN: \_\_\_\_\_ (I)  (V)  (G)  (N/A)

CONTRACTOR: PRIME: \_\_\_\_\_ SUB: \_\_\_\_\_ NAVAL FACILITY: \_\_\_\_\_

CLEANLINESS (SSPC SP-1)		APPLICABLE COAT: (Primer, Stripe, Etc.)				
<b>Surface cleanliness to SSPC-SP 1 inspection prior to surface preparation is satisfactory:</b> Shop/Contractor Signature <sup>[1]</sup> :		Cleanliness Inspection Prior to Task.	Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	
		QA Inspector Sign <sup>[1]</sup> off for Cleanliness (Time & Date)				
		Start Date & Time				
Quality Assurance Inspector Signature <sup>[1]</sup> (Time & Date):		Date & Time of Spray or Stripe Completion				
		Date and Time of Touch Up Completion				
		Minimum Dry/Cure Time (Required/Met Y/N)	/	/	/	
PREPARATION		QA Inspector Sign Off for Completion <sup>[1]</sup>				
Surface Preparation Method:		Shop/Contractor Sign Off for Recoat/Final Cure <sup>[1]</sup>				
<input type="checkbox"/> SSPC-SP 3 <input type="checkbox"/> SSPC-SP 6 <input type="checkbox"/> SSPC-SP 7 <input type="checkbox"/> SSPC-SP 10	<input type="checkbox"/> SSPC-SP 11 <input type="checkbox"/> SSPC WJ-2 <input type="checkbox"/> Other (specify in remarks)	Substrate Temp (°F)/ QA Equip No. <sup>[2]</sup>				
		Ambient Temp (°F) / QA Equip No. <sup>[2]</sup>				
Abrasive media brand, size & Lot Number:  Shop/Contractor Signature for Material <sup>[1]</sup> :		% Relative Humidity / QA Equip No. <sup>[2]</sup>				
		Dew Point (°F) / QA Equip No. <sup>[2]</sup>				
Coating Removal Start Date & Time		Paint Temperature / QA Equip No. <sup>[2]</sup>	Component A (°F)	/	/	/
			Component B (°F)	/	/	/
		Paint Mfr, Formula & Type or Mat Log No <sup>[3]</sup>				
<b>Surface Preparation is in accordance with the SSPC standards specified.</b> Shop/Contractor Signature <sup>[1]</sup> :		Batch No. or Material Log No. <sup>[3]</sup>	Component A			
			Component B			
		Rcpt Inspect No/or Mat Log No / Exp. Date <sup>[3]</sup>				
Quality Assurance Inspector Signature <sup>[1]</sup> :		Avg. DFT (Mils) / QA Equip No. <sup>[2]</sup>				
		Avg. Edge DFT (Mils)/ QA Equip No. <sup>[2]</sup>				
Estimated Square Footage of Job for QA Calculation Purposes:		Remarks (continue on back if needed) <input type="checkbox"/> See back for Continuation:				

[1] Signature certifies, based on personal observation and/or review of certified records that the checkpoint or required action is complete, accurate, and satisfactory. Signature includes at least first initial, last name, badge/employee number, or inspector certification number, and date.

[2] QA Equip Number from Appendix 2.

[3] If Appendix 2a was used, record the Material Log Number from Appendix 2a.

DO NOT WRITE IN MARGINS

DO NOT WRITE IN MARGINS



**Appendix 6 - Quality Assurance Inspection Form – Continuation**

SHEET: \_\_\_ of \_\_\_

NAME & HULL #: \_\_\_\_\_ CONTRACT/TASK ORDER/CLIN/TWD: \_\_\_\_\_

LOCATION OR TANK: \_\_\_\_\_ WORK ITEM: \_\_\_\_\_

REQ'T DOCUMENT: \_\_\_\_\_ FY: \_\_\_\_\_ TABLE: \_\_\_\_\_ LINE: \_\_\_\_\_ COLUMN: \_\_\_\_\_ (I)  (V)  (G)  (N/A)

CONTRACTOR: PRIME: \_\_\_\_\_ SUB: \_\_\_\_\_ NAVAL FACILITY: \_\_\_\_\_

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APPLICABLE COAT: (Primer, Stripe, Etc.)					
Cleanliness Inspection Prior to Task.		Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	Sat <input type="checkbox"/> Unsat <input type="checkbox"/>
QA Inspector Sign <sup>[1]</sup> off for Cleanliness (Time & Date)					
Start Date & Time					
Date and Time of Spray or Stripe Completion					
Date and Time of Touch Up Completion					
Minimum Dry/Cure Time (Required/Met Y/N)		/	/	/	/
QA Inspector Sign Off for Completion <sup>[1]</sup>					
Shop/Contractor Sign Off for Recoat/Final Cure <sup>[1]</sup>					
Substrate Temperature (°F) / QA Equipt No. <sup>[2]</sup>		/	/	/	/
Ambient Temperature (°F)/ QA Equipt No. <sup>[2]</sup>		/	/	/	/
% Relative Humidity / QA Equipt No. <sup>[2]</sup>		/	/	/	/
Dew Point (°F) / QA Equipt No. <sup>[2]</sup>		/	/	/	/
Paint Temperature / QA Equipt No. <sup>[2]</sup>	Component A	/	/	/	/
	Component B	/	/	/	/
Paint Mfr, Formula & Type or Mat Log No <sup>[3]</sup>					
Batch No. or Material Log No. <sup>[3]</sup>	Component A				
	Component B				
Rept Inspect No / or Mat Log No / Exp. Date <sup>[3]</sup>					
Avg. DFT (Mils)/ QA Equipt No. <sup>[2]</sup>		/	/	/	/
Avg. Edge DFT (Mils) QA Equipt No. <sup>[2]</sup>		/	/	/	/
Estimated Square Footage of Job for QA Calculation Purposes (include spread rate if nonskid):	Remarks (continue on back if needed) <input type="checkbox"/> See back for Continuation:				

[1] Signature certifies, based on personal observation and/or review of certified records that the checkpoint or required action is complete, accurate, and satisfactory. Signature includes at least first initial, last name, badge/employee number, or inspector certification number, and date.

[2] QA Equipt Number from Appendix 2.

[3] If Appendix 2a was used, record Material Log Number from Appendix 2a.

**Appendix 7 - Quality Assurance Inspection Form – Dry/Wet Film Thickness Measurements**

SHEET: \_\_\_ of \_\_\_

NAME & HULL #: \_\_\_\_\_ CONTRACT/TASK ORDER/CLIN/TWD: \_\_\_\_\_

LOCATION OR TANK: \_\_\_\_\_ WORK ITEM: \_\_\_\_\_

REQ'T DOCUMENT: \_\_\_\_\_ FY: \_\_\_\_\_ TABLE: \_\_\_\_\_ LINE: \_\_\_\_\_ COLUMN: \_\_\_\_\_ (I)  (V)  (G)  (N/A)

CONTRACTOR: PRIME: \_\_\_\_\_ SUB: \_\_\_\_\_ NAVAL FACILITY: \_\_\_\_\_

(All readings are in mils)

QA Equipmt No. from App. 2	Area/Location/Edge	Reading (1)	Reading (2)	Reading (3)	Average (1) <sup>[2]</sup>	
	(A)					WFT / DFT
	(B)					COAT:
	(C)					
	(D)					
	(E)					
	Area/Location/Edge	Reading (1)	Reading (2)	Reading (3)	Average (1) <sup>[2]</sup>	
	(A)					WFT / DFT
	(B)					COAT:
	(C)					
	(D)					
	(E)					
	Area/Location/Edge	Reading (1)	Reading (2)	Reading (3)	Average (1) <sup>[2]</sup>	
	(A)					WFT / DFT
	(B)					COAT:
	(C)					
	(D)					
	(E)					
	Area/Location/Edge	Reading (1)	Reading (2)	Reading (3)	Average (1) <sup>[2]</sup>	
Sat <input type="checkbox"/> Unsat <input type="checkbox"/>	Average (3) WFT/DFT Total:		Visual Holiday Check Sat <input type="checkbox"/> Unsat <input type="checkbox"/>		Shop/Contractor Signature & Date <sup>[1]</sup> :	
Remarks (continue on back if needed) <input type="checkbox"/> See back for Continuation:				(G) Quality Assurance Inspector Signature & Date <sup>[1]</sup> :		

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<sup>[1]</sup> Signature certifies, based on personal observation, that the data entered above is complete and accurate. Signature includes at least first initial, last name, badge/employee number, or inspector certification number, and date.  
<sup>[2]</sup> For electronic equipment that accumulates information in batches and self averages, it is acceptable to enter only the average of the readings for each spot.

**Appendix 8 - Quality Assurance Inspection Form – Preservation Minor Deficiencies**

SHEET: \_\_\_ of \_\_\_

NAME & HULL #: \_\_\_\_\_ CONTRACT/TASK ORDER/CLIN/TWD: \_\_\_\_\_

LOCATION OR TANK: \_\_\_\_\_ WORK ITEM: \_\_\_\_\_

REQ'T DOCUMENT: \_\_\_\_\_ FY: \_\_\_\_\_ TABLE: \_\_\_\_\_ LINE: \_\_\_\_\_ COLUMN: \_\_\_\_\_ (I)  (V)  (G)  (N/A)

CONTRACTOR: PRIME: \_\_\_\_\_ SUB: \_\_\_\_\_ NAVAL FACILITY: \_\_\_\_\_

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Requirements:

- a. This table is for deficiencies not requiring Engineering resolution, however may be used to document deficiencies that will be cleared via DL to allow work to continue per verbal from C/250VP.
- b. All items entered require reinspection by the appropriate Independent QA, shop inspector, or SUPERVISOR. If Independent QA is required for the work performed by the TWD or Work Item, an Independent inspector or Government Engineering Code signature is required for reinspection and clearing the discrepancy. If S/71 or Contractor QA is required for the work performed by the TWD or Work Item, S/71 QA or Contractor QA signature is acceptable for reinspection and clearing the discrepancy. For work performed by a contractor SUPERVISOR signature is required to clear the deficiency.
- c. Work per the requirements of the TWD or Work Item directing the original work, and any other applicable instructions.
- d. All deficiencies must be cleared prior to proceeding to the next coat.

No.	Found By (Name, Shop/Code, & Date)	Location and Description of Deficiency	Date and Time Repair Started and Completed	Deficiency Cleared Shop/Contractor Signature <sup>[1]</sup>	Deficiency Cleared Inspector Signature <sup>[2]</sup>

Remarks (continue on back if needed)  See back for Continuation:

<sup>[1]</sup> Signature certifies, based on personal observation, that the data entered is complete and accurate. Signature includes at least first initial, last name, badge/employee number, or inspector certification number, and date.

<sup>[2]</sup> Signature certifies, based on personal observation and/or review of certified records that the checkpoint or required action is complete, accurate, and satisfactory. Signature certifies, based on personal observation, that the data entered above is complete and accurate. Signature includes at least first initial, last name, badge/employee number, or inspector certification number, and date.

### GENERAL COMMENT SHEET

SHEET: \_\_\_ of \_\_\_

NAME & HULL #: \_\_\_\_\_ CONTRACT/TASK ORDER/CLIN/TWD: \_\_\_\_\_  
 LOCATION OR TANK: \_\_\_\_\_ WORK ITEM: \_\_\_\_\_  
 REQ'T DOCUMENT: \_\_\_\_\_ FY: \_\_\_\_\_ TABLE: \_\_\_\_\_ LINE: \_\_\_\_\_ COLUMN: \_\_\_\_\_ (I)  (V)  (G)  (N/A)   
 CONTRACTOR: PRIME: \_\_\_\_\_ SUB: \_\_\_\_\_ NAVAL FACILITY: \_\_\_\_\_

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Appendix Number/Sheet	Note Number	Comment

## Instructions

### Quality Assurance Inspection Forms

This document describes the entries and provides directions for completing the Appendices for Standard Item 009-32.

#### GENERAL NOTES:

1. The following notes apply to QA forms that are developed in hard copy format. As CQATK (Coating Quality Assurance Tool Kit) database use is implemented, certain appendices will be developed electronically, and may not be present at the jobsite in a hard copy form with the following exceptions:
  - a. A copy of Appendix 6 reflecting the current status of the job must be available to the inspectors either in hard copy or electronically, including all certifications, prior to starting a check point.
  - b. At the inspector's discretion, an electronic or hard copy of any and all applicable appendices must be available prior to starting, or during the check point.
2. All appendices for a specific record, area, or tank must be kept together in one packet so the contractor/shop and inspector can easily determine if all prerequisite steps have been completed prior to accepting a checkpoint. This will reduce the potential for missing QA information and easily identify process discrepancies so they can be corrected in process rather than being discovered during record review. This practice will also reduce rework.
3. All blocks must have an entry. If the block does not apply to your job, enter "N/A." If an entire section, or several contiguous blocks are not applicable, a line can be drawn through the section or blocks with a single "N/A" entered.
4. Some appendices are optional. If so, the instructions below will state that the appendix is optional, when to use it, and what to do if it is not used.
5. If a person makes multiple entries on the same sheet he/she can initial and date additional entries so long as at least one of the entries on each sheet has a complete signature.
6. In some cases all of the documentation for a task can be documented on one sheet of the appendix. If a task requires the use of more than one sheet of an appendix, make additional copies as needed, and number them as "Sheet X of Y." (Where X = the current page and Y= total number of pages of the particular appendix). Since the total number of pages may not be known during execution of the job, the "Y" entry may be made upon completion of all documentation required by the Appendix instead of as sheets are generated.
7. All certification signatures throughout the QA Appendices are based on personal observation (either you personally did it, or you personally observed someone do it) unless otherwise stated.
8. For all direction that states "For shipyard use..." the instruction applies to Naval Shipyards, Intermediate Maintenance Facilities (IMF)s, and Trident Refit Facilities (TRF)s.
9. For all preservation minor deficiencies refer to appendix 8.
10. Completely fill out the headings on the first page of each record. When all appendices are kept as one record, in one folder, as a minimum, subsequent sheets must contain entries for:
  - a. "SHEET: OF: \_,"
  - b. "NAME & HULL: \_,"
  - c. "CONTRACT/TASK ORDER/CLIN/TWD: \_,"
  - d. "LOCATION OR TANK: \_:"

e. Remaining entries for the header are not necessary. If appendices are not kept as one record, all header entries must be completed on each sheet of each appendix.

11. For electronic equipment that accumulates information in batches and self-averages, it is acceptable to enter only the average of the readings for each spot; however, a print out of the actual data must have a certification signature and be attached to the record. Once CQATK is used all averaging will be performed within CQATK.

a. Once the CQATK database is in use, download all raw data to the database where it will be averaged and entered on the appropriate electronic forms.

b. For equipment where a print out of the self averaged values is not available, each data entry collected must be entered on the appropriate appendix.

12. When the term "SUPERVISOR" is used in capital letters in this document and in the appendices, the term refers to the RMC Ship Building Specialist (SBS) or other RMC representative, or the cognizant code in a Naval Facility (typically Code 250, 413, 440 or Code 133). The term does not refer to the Production Shop supervisor in a Naval Facility.

13. When readings are taken and recorded, but are out of specification, retain those sheets of readings as well as any readings taken later to show that the area was repaired. Note on the data sheets with unsatisfactory data what was done, such as "Area was reblasted and new profile readings are on Sheet X of Y."

14. **(I) (V) (G) (N/A):** (I), (V), and (G) are defined in 009-04. For use in a Naval facility by government production workers, (I) = Shop QA, separate from the individual that performed the work; (V) = Production worker qualified to record the information, may be the individual that performed the work; (G) = Independent Inspector. For Shop QA, sign in the (I) signature block and enter "N/A" in the (G) signature block. Although actions are assigned via local instructions for each type of inspection (I), (V), and (G), the boxes were included for RMC use with contractor personnel. For Naval Shipyard work no entry is required, and assume "N/A."

### **ALL APPENDICES:**

#### **HEADING:**

**SHEET:** **OF:** Enter the sheet number in the first blank space, starting with 1. When the entire job is complete, count the sheets of the specific appendix and enter the total number of sheets in the second blank space on each sheet of the appendix. These numbers will be unique for each job and for each appendix.

**NAME & HULL:** Enter the name of the ship and the hull number, such as "CARL VINSON, CVN 74."

**CONTRACT/TASK ORDER/CLIN/TWD:** Enter the document that authorizes or directs the work.

**LOCATION OR TANK:** Enter the location, such as "Hull Fr 20 to 26" or "Hull Zone 3 & 4" or tank number.

**WORK ITEM:** The item within the contract that directs the work being performed. See note 10 above. For Naval facilities this may be N/A'ed.

**REQ'T DOCUMENT:** The document that describes the requirements for the work being performed. Typically this is Standard Item 009-32; if so an entry of "009-32" is acceptable. For Naval Facilities, this may be a local document or work package. See note 10 above. For Naval facilities this may be N/A'ed.

**/FY:** Enter the Fiscal Year of the 009-32 that is applicable to the work being performed. For Naval Facility use where work is directed by another reference, this may be "N/A." See note 10 above.

**TABLE:** Enter the Table Number from 009-32 that describes the work being performed. For Naval facility use, when technical direction is provided via a Technical Work Document (TWD) this may be “N/A” as there will be specific direction for surface preparation, coatings, and DFT values in the TWD. The TWD number was entered in the “CONTRACT/TASK ORDER/CLIN/TWD” block. See note 10 above.

**LINE:** Enter the Line from the Table from 009-32 that describes the work being performed. For Naval facility use, when technical direction is provided via a TWD this may be “N/A.” See note 10 above.

**COLUMN:** Enter the Column from the Table from 009-32 that describes the work being performed. For Naval facility use, when technical direction is provided via a TWD this may be “N/A.” See note 10 above.

**(I) (V) (G) (N/A):** (I), (V), and (G) are defined in 009-04. Check the level of inspection required for the form. If more than one level of inspection is required on the form, check all that apply. For Naval Shipyard work no entry is required, and assume “N/A.” as the required inspections are defined in local instructions. See notes 10 and 14 above.

**CONTRACTOR: PRIME: - SUB:** Enter the name of the Prime and Sub Contractors. For Naval Facility use enter the shop number such as “Shop 71” for the Prime Contractor and “N/A” for the Sub Contractor. See note 10 above.

**NAVAL FACILITY:** Enter the location where the work is being performed if it is a Naval Facility. If the work is performed in a private shipyard, enter “N/A.” See note 10 above.

**REMARKS/COMMENTS:** This block is on the bottom of all forms. If there is anything that needs to be clarified, when conditions are not apparent based on the entries made in the form, or in cases of brief disruption due to equipment failure, etc., enter notes in this area. Continue on back if necessary. The intent is that looking at the appendices 2 years from now we can determine what happened during surface preparation, application, and curing of the coating. See note 10 above.

## **APPENDIX 1 - ENVIRONMENTAL READINGS:**

**QA EQUIPT NO FROM APP 2:** Enter the equipment number assigned in Appendix 2 for the gauges being used to take environmental readings. Enter “N/A” if Appendix 2 is not used. See Appendix 2 instructions for clarification.

**DATE:** Enter the date that the readings were taken.

**TIME:** Enter the time that the readings were taken.

**READING TYPE:** Enter whether the reading was recorded using an automatic data logger or if taken manually.

**LOWEST SUBSTRATE TEMP:** While performing other inspections, such as cleanliness, completion of the previous task, etc., take readings at various places within the tank or work area. Determine the area with the lowest substrate temperature. Record the readings from that area.

**AMBIENT TEMP:** While performing other inspections, such as cleanliness, completion of the previous task, etc., take readings at various places within the tank or work area. Determine the area with the lowest ambient temperature. Enter the lowest ambient temperature in the work area or tank.

**% RH:** Enter the relative humidity reading in the work area or tank.

**NOTE:** If several people enter a tank for inspection purposes and the dehumidification is removed for entry, the humidity reading may rise rapidly. This does not represent the conditions during work and curing. Recommend taking the environmental readings upon entry before the readings are affected by

the number of people in the tank. If readings are not within specification, record the readings that were taken, reestablish the actual conditions as well as possible, allow a short time for the conditions to stabilize and take the environmental readings again. If the new reading is acceptable, record that reading and continue with work making note of the conditions that caused the previous out of specification reading. If the new reading is not acceptable, record the reading and take corrective actions. Reestablish acceptable conditions prior to continuing work unless otherwise directed by engineering personnel.

**DEW POINT:** Enter the reading from the electronic gauge, or the calculated reading using the psychrometric chart.

**WET BULB:** Enter the reading from the wet bulb temperature from the electronic gauge or from the psychrometer, if used. If an electronic gauge is used, and it does not provide the wet bulb temperature, enter "N/A."

**SIGNATURE:** The person who took the environmental readings signs stating that the readings are complete and accurate. The signature does not indicate that the readings are acceptable. It is important to sign for all readings, regardless of their acceptability so that if there are follow up questions regarding conditions or recovery actions the person who knows what happened is identified.

**COMMENTS:** Enter the current process being performed; blasting, spray painting, touch up, curing, etc. Enter condition if not satisfactory, and what actions were taken to recover. For potable water, reserve feedwater, and freshwater drain collecting tanks the requirement to verify that ventilation is running can also be recorded here.

**NOTE:** Entering problems and recovery efforts, as well as the current process steps assists the engineering code to determine if a result is acceptable, and if not, what additional recovery actions to take.

## **APPENDIX 2 QA EQUIPMENT LOG SHEET:**

### **NOTES:**

- Appendix 2 is not required when calibrated equipment is maintained in a NAVSEA approved METCAL program, or NAVSEA approved equivalent.
- Appendix 2 allows the inspector and worker to enter all of the information for a piece of calibrated equipment once and simply refer to the assigned number thereafter. This practice reduces the number of duplicative entries made by the workers, and reduces the potential for transcription errors.
- If Appendix 2 is not used, simply omit Appendix 2 from the QA package.

**QA EQUIPT NO:** Assign a sequential number to each piece of calibrated equipment. Enter the sequential number in this block.

**TYPE OF QA EQUIPT:** Enter the type of equipment, such as DFT Gauge, Dew Check, Temperature Humidity Gauge, etc.

**QA EQUIPT MANUFACTURER:** Enter manufacturer's name.

**SER # OR CAL #:** If equipment is in a calibration system, enter the calibration number. If the equipment is not in a calibration system, enter the equipment serial number.

**CALIBRATION DUE DATE:** Enter the date when the next calibration is due.

**SIGNATURE:** The person who entered the equipment data signs stating that the information is complete and accurate for that piece of equipment.

## **APPENDIX 2a MATERIAL LOG SHEET:**



NOTES:

- Appendix 2a is optional at the Contractor's or Paint Shop Supervisor's discretion. Like Appendix 2, Appendix 2a allows the worker to enter all of the required information one time for a specific batch of material, or blast media. When performing work on a hull or large area where several QA records will be generated, Appendix 2a reduces the documentation burden for entries in Appendix 6.
- A copy of Appendix 2a may be inserted in each QA package to reduce transcription errors. If a copy is used the following requirements apply:
  - All original entries must be made only on the original.
  - A list of all affected packages must be kept with the original Appendix 2a so they can be updated with a new copy of Appendix 2a.
- When performing work on a tank or small job where only one QA record will be generated, do not use Appendix 2a; simply enter the required information on Appendix 6.
- If Appendix 2a is not used, simply omit Appendix 2a from the QA package.

**MATERIAL LOG NO:** Assign a sequential number to each lot of abrasive material, or batch of coating material (Part "A" and Part "B" each require an entry). Enter the sequential number in this block.

**RECEIPT INSPECTION # OR LAB REPORT #:** If the material was receipt inspected, enter the receipt inspection or lab report number per your local instructions. If material was accepted based on a Certificate of Compliance, enter "CoC."

**SHELF LIFE EXPIRATION DATE:** Enter the latest shelf life expiration date. This date may be extended by usability testing per local instructions, and therefore it may not be the original shelf life expiration date.

**PAINT MANUFACTURER OR ABRASIVE MEDIA BRAND:** Enter the paint manufacturer's name, or the abrasive media manufacturer's name.

**PRODUCT NAME & NUMBER OR ABRASIVE MEDIA SIZE:** Enter the product name and number or MIL-SPEC number (if applicable). Enter the abrasive media name and size such as 25/40 grit, 40 grit, etc.

**BATCH OR LOT NUMBER:** Enter the material batch or lot number.

**PAINT OR ABRASIVE MEDIA TYPE (PRIMER (PART A/PART B), TOPCOAT, ETC):** Enter the type of abrasive media (steel shot, steel grit, garnet, aluminum oxide, black beauty, etc), or the type of paint, such as "Epoxy Primer, Part A" or "Epoxy Top Coat Part B" or "Antifouling."

**SIGNATURE:** The person who entered the material information signs stating that the information is complete and accurate.

**APPENDIX 3 SURFACE PREPARATION – SURFACE PROFILE LOG METHOD C:**

NOTE: Use Appendix 3 for Method C with TESTEX Tape. Use Appendix 3a for Method B with an electronic gauge.

**QA EQUIPT FROM APP NO 2:** Enter the sequential number assigned in Appendix 2 for the QA Equipment being used to measure the profile. This would be the micrometer for Method C. Enter "N/A" if Appendix 2 is not used.

**AREA/LOCATION:** Enter the location where the reading was taken, such as U/L Outbd, L/L Aft Inbd, etc.

**READING:** Enter reading for each tape.

AVERAGE: Enter value of average for the three tapes.

SAT/UNSAT: Check whether the readings for the page are Sat or Unsat. Acceptance or rejection is based on the Average Total Profile, not the average of three tapes.

AVERAGE SURFACE PROFILE: Average all of the recorded readings for the sheet and enter the average.

(I) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The person who entered the average profile data, based on personal observation, signs stating that the information is complete and accurate. If readings were taken and entered by Government Representative (G) enter "N/A" in this block.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The Government Representative, based on personal observation (either you personally did it, or you personally observed someone do it), signs stating that the information is complete and accurate.

### **APPENDIX 3a SURFACE PREPARATION – SURFACE PROFILE LOG METHOD B:**

NOTE: Use Appendix 3a for Method B with an electronic gauge. Use Appendix 3 for Method C with TESTEX Tape.

QA EQUIPT FROM APP NO 2: Enter the sequential number assigned in Appendix 2 for the QA Equipment being used to measure the profile. This would be an electronic gauge for Method B. Enter "N/A" if Appendix 2 is not used.

AREA/LOCATION: Enter the location where the reading was taken, such as U/L Outbd, L/L Aft Inbd, etc.

READING: Enter the value of each profile reading touch for the area; 10 touches per area for Method B. If a gauge is used that provides an average, it is acceptable to line out and "N/A" the readings and enter the average.

AVERAGE: Enter the average of the ten profile touches for the area.

SAT/UNSAT: Check whether the readings are Sat or Unsat. Acceptance or rejection is based on the Average Total Profile, not the average of ten readings.

AVERAGE SURFACE PROFILE: Average all of the recorded readings for the sheet and enter the average.

(I) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The person who entered the profile data, based on personal observation, signs stating that the information is complete and accurate. If readings were taken and entered by Government Representative (G) enter "N/A" in this block.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The Government Representative, based on personal observation (either you personally did it, or you personally observed someone do it), signs stating that the information is complete and accurate.

### **APPENDIX 4 SURFACE PREPARATION – CONDUCTIVITY LOG:**

QA EQUIPT FROM APP NO 2: Enter the sequential number assigned in Appendix 2 for the QA Equipment being used to measure the conductivity. Enter "N/A" if Appendix 2 is not used.

CHLORIDE/CONDUCTIVITY READING: At the top of the column, check the appropriate unit of measure. In the column, enter the reading obtained for the chloride or conductivity.

AREA/LOCATION: Enter the location where the reading was taken, such as U/L Outbd, L/L Aft Inbd, etc.

SAT/UNSAT: Check whether the reading is Sat or Unsat.

(I) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The person who entered the chloride/conductivity data, based on personal observation, signs stating that the information is complete and accurate. If readings were taken and entered by Government Representative (G) enter "N/A" in this block.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The Government Representative, based on personal observation (either you personally did it, or you personally observed someone do it), signs stating that the information is complete and accurate.

### **APPENDIX 5 SURFACE PREPARATION - PRESSURE SENSITIVE TAPE SAMPLE LOG:**

NOTE: Per SI 009-32 Appendix 5 is applicable for nonskid flight decks and underwater hull of surface ships only when prepared by abrasive blasting, open lance water jetting, or mechanical methods. Appendix 5 is not required if surfaces are prepared by closed loop water jetting. If this appendix is not required for the work being performed, leave this appendix out of the QA package.

DUST QUANTITY RATING: Enter the value based on comparison of the tape with the measurement standard.

DUST SIZE RATING: Enter the value based on comparison of the tape with the measurement standard.

AREA/LOCATION: Enter the location where the reading was taken, such as U/L Outbd, L/L Aft Inbd, etc.

SAT/UNSAT: Check whether the reading is Sat or Unsat.

(I) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The person who entered the dust test data, based on personal observation, signs stating that the information is complete and accurate. If readings were taken and entered by Government Representative (G) enter "N/A" in this block.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The Government Representative, based on personal observation (either you personally did it, or you personally observed someone do it), signs stating that the information is complete and accurate.

### **APPENDIX 6 PREPARATION AND ANTI-CORROSIVE (AND CONTINUATION SHEET):**

NOTES:

1. Appendix 6 is where certifications are made that the work performed and the material used meets the specification, and that it is acceptable to move on to the next step in the task. All the other Appendices are the OQE that supports the signatures in Appendix 6. If the entries in one column of Appendix 6 are incomplete or discrepancies within a column have not been reconciled, then it is not appropriate to move on and perform the tasks for the next column.
2. Use of Appendix 6 in a Naval Facility precludes use of CAPS Sheet from Contractor QA Forms.
3. The following surface preparation blocks are located on the left side of the 1st sheet of Appendix 6. Continuation sheets may be used as necessary to document all coats of paint; however, the surface preparation information is not necessary for continuation sheets. Cleanliness prior to task is required; however, the timeframe between the inspection and the subsequent task is not specified. Perform the cleanliness inspection for the next task and sign for it during the acceptance inspection for the previous task. For work performed by PSNS&IMF personnel, cleanliness inspection within 24 hours is required between coats of paint if contamination is suspected; otherwise, the surface cleanliness inspection performed during the previous inspection is acceptable.

SURFACE CLEANLINESS TO SSPC-SP 1 INSPECTION PRIOR TO SURFACE PREPARATION IS SATISFACTORY:

SHOP/CONTRACTOR SIGNATURE: The person who signs this block is representing the shop or contractor and is stating, based on personal observation, that the surface cleanliness is complete and meets the standard of SSPC-SP 1.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE: The person who signs this block is the Government Representative and is stating, based on personal observation (either you personally did it, or you personally observed someone do it), that the surface cleanliness is complete and meets the standard of SSPC-SP 1. Signature include time and date of inspection. When two inspections are required, i.e., prior to blast protection and prior to surface preparation, make the first signature in the "Remarks" block with a statement "SP-1 Sat prior to blast protection." Make the second SSPC-SP 1 signature in the Surface Cleanliness block.

SURFACE PREPARATION METHOD: Contractor/shop entry to identify the surface preparation method used. Check the applicable block.

ABRASIVE MEDIA BRAND, SIZE: Contractor/shop entry for the abrasive media brand, size, and lot number. If Appendix 2A is used, simply enter the Material Log Number from Appendix 2A.

SHOP/CONTRACTOR SIGNATURE FOR MATERIAL: The person who signs this block is representing the shop or contractor and is stating, based on personal observation, that the surface preparation material information entries are complete and accurate.

COATING REMOVAL START DATE & TIME: This is a data entry by the shop/contractor accomplishing the specified work. Data reflects actual start of coating removal process.

SURFACE PREPARATION IS IN ACCORDANCE WITH THE SSPC STANDARDS SPECIFIED:

SHOP/CONTRACTOR SIGNATURE: The person who signs this block is representing the shop or contractor and is stating, based on personal observation, that the surface preparation is complete and meets the standard required by the technical work document.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE: The person who signs this block is the Government Representative and is stating, based on personal observation, that the surface preparation is complete and meets the standard required by the technical work document. Attributes includes complete visual inspection, review of Appendices 1, 2, 2a, 3 or 3a, 4, 5, 6, 7, & 8 as applicable for the job and task to verify acceptable conditions have been recorded on Appendices.

APPLICABLE COAT (PRIMER, STRIPE, ETC.): Contractor or Shop representative enter the coat of paint being applied, such as "Primer," "Topcoat," "Stripe Coat," or "Antifouling."

CLEANLINESS INSPECTION PRIOR TO TASK: Government Representative enter "Sat," or "Unsat." This inspection is required prior to initial coating removal, and each application; however, the timeframe between the inspection and the next application is not specified. Therefore, PSNS&IMF has determined that, based on our work practices, in cases where contamination is suspected, an inspection and signature within 24 hours prior to the next task provides a low risk method to ensure cleanliness. Typically the inspection performed concurrent with the acceptance inspection for the previous task is adequate. See Note 3 above.

SIGNATURE: The person who signs this block is the Government Representative and is stating, based on personal observation (either you personally did it, or you personally observed someone do it), that the surface cleanliness is complete and meets the standard required by the technical work document.

START DATE & TIME: This is a data entry by the shop/contractor accomplishing the specified work. Data reflects actual start of spray painting for abrasive blasted items and start of brushing for touch up and stripe coats.

DATE AND TIME OF SPRAY OR STRIPE COMPLETION: Data entry by the shop/contractor to calculate the Dry/Cure time completion. The time of completion is the time when application (spray or brush and roll) is complete for a specific coat of paint, not including touch up.

DATE AND TIME OF TOUCH UP COMPLETION: Data entry by the shop/contractor to calculate the Dry/Cure time completion. The time of completion is the time when application (spray or brush and roll) is complete for a specific coat of paint, including touch up.

MINIMUM DRY/CURE TIME (REQUIRED/MET Y/N): Data entry by the shop/contractor for the time required for drying and curing of the paint coat. Since the required cure time can be affected by temperature, this block is filled in just prior to the application of the subsequent coat of paint. The Shop/Contractor is responsible to ensure adequate cure time and conditions have been achieved prior to application of the subsequent coat of paint.

(G) QA INSPECTOR SIGN OFF FOR COMPLETION: Signature, badge number (printed name for contractors) and date represents acceptable key inspection points for the qualified inspector. Signature verifies that coating has been applied in accordance with TWDs, including recording of correct cure times of previous coat; proper environmental conditions, and dry film thickness; proper coating used and has been inspected for workmanship attributes. Attributes includes complete visual inspection, review of Appendices 1 through 8 as applicable for the job and task to verify acceptable conditions have been recorded on Appendices.

SHOP/CONTRACTOR SIGN OFF FOR RECOAT/FINAL CURE: Signature, badge number (printed name for contractors instead of badge number) and date represent correct final cure times or correct cure times prior to application of next coat of paint and proper environmental conditions have been achieved.

SUBSTRATE TEMP/ QA EQUIPT NUMBER: Data entry by the shop/contractor performing work for substrate temperature at the work-site at start of spray/touch-up/or stripe coat. Enter the QA Equipment Number from Appendix 2A. Enter "N/A" if Appendix 2 is not used. Environmental entries on Appendix (6) must be entered on Appendix (1) as well. This is required to provide documentation of satisfactory environmental conditions throughout the coating system application and curing.

AMBIENT TEMP/ QA EQUIPT NUMBER: Data entry by the shop/contractor performing work for ambient temperature at the work-site at start of spray/touch-up/or stripe coat. Enter the QA Equipment Number from Appendix 2A. Enter "N/A" if Appendix 2 is not used. Environmental entries on Appendix (6) must be entered on Appendix (1) as well. This is required to provide documentation of satisfactory environmental conditions throughout the coating system application and curing.

RELATIVE HUMIDITY/ QA EQUIPT NUMBER: Data entry by the shop/contractor performing work for relative humidity at the work-site at start of spray/touch-up/or stripe coat. Enter the QA Equipment Number from Appendix 2A. Enter "N/A" if Appendix 2 is not used. Environmental entries on Appendix (6) must be entered on Appendix (1) as well. This is required to provide documentation of satisfactory environmental conditions throughout the coating system application and curing.

DEW POINT/ QA EQUIPT NUMBER/: Data entry by the shop/contractor performing work for dew point temperature at the work-site at start of spray/touch-up/or stripe coat. Enter the QA Equipment Number from Appendix 2A. Enter "N/A" if Appendix 2 is not used. Environmental entries on Appendix (6) must be entered on Appendix (1) as well. This is required to provide documentation of satisfactory environmental conditions throughout the coating system application and curing.

PAINT TEMPERATURE/QA EQUIPT NUMBER: [Anti-Corrosive Coatings only]: Data entry by the shop/contractor performing work for temperature of paint just prior to combining components A and B to ensure it is within manufacturer's specifications. Component A should be stirred (mixed) prior to taking its core temperature to verify that it is in the proper range; the same for component B. Enter the QA Equipment Number from Appendix 2A and the paint temperature recorded. Enter "N/A" if Appendix 2 is

not used. This is not required by the NSTM S9086-VD-STM-010/CH-631R3 but has been found very useful when using high solid coatings to estimate pot life after mixing. This temperature measurement may be used to meet the optional measurement of SI 009-32 Paragraph 3.1.13.2, or this block may be N/A'd if not used.

**PAINT MANUFACTURER, FORMULA & TYPE:** Data entry by the shop/contractor performing work to provide the coating manufacturer and formula type. Used to ensure proper type of coating is being used in a specific area and for documentation in the Docking Report. If enclosure (2A) is used, enter the Material Log Number from Appendix 2A in this block.

**BATCH NUMBER OR MATERIAL LOG NUMBER- COMPONENT A:** Data entry by the shop/contractor performing work to provide the specific batch of coating being applied. Used for documentation in the Docking Report and for investigative purposes if there is a major problem with coating; e.g., coating not drying. If enclosure (2A) is used, enter the Material Log Number from Appendix 2A in this block.

**BATCH NUMBER OR MATERIAL LOG NUMBER - COMPONENT B:** [Not required for Anti-Fouling Coatings or other single component material]: Data entry by the shop/contractor performing work to provide the specific batch of coating being applied. Used for documentation in the Docking Report and for investigative purposes if there is a major problem with coating; e.g., coating not drying. If enclosure (2A) is used, enter the Material Log Number from Appendix 2A in this block.

**RECEIPT INSPECTION RECORD NUMBER/EXPIRATION DATE:** Data entry by shop/contractor performing work to provide test number found on the Paint Inspection Label on paint container and expiration date of paint. For Shelf Life Extension/Batch Compatibility Testing, record the Test Number, not the Receipt Inspection Number used to verify that paint has been inspected, is not expired and meets requirements and approval for Navy use. Use the latest date recorded for your combination of component A and B. If enclosure (2A) is used, enter the Material Log Number from Appendix 2A in this block.

**AVG. DFT/ QA EQUIPT NUMBER:** Data entry by the preservation inspector for the average dry film thickness reading of the coating per SSPC PA2 requirements. Average DFT is obtained from Appendix 7.

**AVG. EDGE DFT /QA EQUIPT NUMBER:** Data entry by the preservation inspector for the average dry film thickness reading of the coating per SSPC PA2 requirements taken on edges in cases where a stripe coat was eliminated. Average DFT is obtained from Appendix 7.

**ESTIMATED SQUARE FOOTAGE OF JOB FOR QA CALCULATION PURPOSES:** Enter the amount of square footage agreed upon between the Shop/Contractor and the SUPERVISOR or Engineering Code. This number is used to determine the number of readings required for all OQE only. This number is an agreed upon estimate for QA, and is not binding as a representation of actual square footage worked or contracted, nor is it represented as a government estimate for labor and material estimation. If performing nonskid application, also enter nonskid spread rate here.

### **APPENDIX 7 – WET/DRY FILM THICKNESS MEASUREMENTS:**

**QA EQUIPT FROM APP NO 2:** Enter the sequential number assigned in Appendix 2 for the QA Equipment being used to measure the dry film thickness. For wet film thickness readings, enter “N/A” in this block. Enter “N/A” if Appendix 2 is not used.

**AREA/LOCATION/EDGE:** Enter the location where the reading was taken, such as U/L Outbd, L/L Aft Inbd, etc.

**READINGS (1), (2) and (3):** Enter the touch reading.

**AVERAGE (1):** Enter the average of the 3 touch reading. If the DFT gauge is self averaging, enter the average from the gauge and N/A Readings (1), (2) and (3).

WFT/DFT: Circle WFT or DFT as appropriate.

COAT: Enter the coat of paint being measured, such as “Prime,” “Top Coat,” “Edge Readings,” etc.

AVERAGE (2): Enter the average for the 5 spot readings.

AVERAGE (3): Enter the average for the 3 M-areas.

VISUAL HOLIDAY CHECK: Check “Sat” or “Unsat” as appropriate.

SHOP/CONTRACTOR SIGNATURE: The person who entered the wet or dry film thickness data signs stating that the information is complete and accurate. If readings were taken and entered by Government Representative (G) enter “N/A” in this block.

(G) QUALITY ASSURANCE INSPECTOR SIGNATURE AND DATE: The Government Representative, based on personal observation, signs stating that the information is complete and accurate.

**APPENDIX 8 PRESERVATION MINOR DEFICIENCIES:**

NO: Assign a sequential number to the discrepancy, enter the number.

FOUND BY: Enter the name, shop/contractor/code, and date.

LOCATION, DESCRIPTION OF DEFICIENCY: Enter the location where the discrepancy was found, such as U/L Outbd, L/L Aft Inbd, etc. Enter a description of the discrepancy.

DATE AND TIME REPAIR STARTED AND COMPLETED: Enter the date and time discrepancy repair was started and completed.

DEFICIENCY CLEARED SHOP/CONTRACTOR SIGNATURE: Enter a brief description of how the discrepancy was resolved, and a complete signature.

DEFICIENCY CLEARED AND INSPECTOR SIGNATURE: Enter a signature verifying that the discrepancy was cleared. This certification is based on personal observation, and if necessary, a set of appropriate readings, such as profile, chlorides, DFT, etc. If necessary, add another sheet to the appropriate appendix. If necessary, enter a brief description of how the discrepancy was cleared.

**GENERAL COMMENT SHEET**

Use this form for notes or comments that do not fit on the individual appendices. Use for administration of minor discrepancies is at the discretion of the local engineering code or SUPERVISOR.