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1. SCOPE:

1.1 Title: General Occupational Safety, Health and Environment (OSHE) Requirements for Work Within Norfolk Naval Shipyard; accomplish (PCP)

1.2 Location of Work:

1.2.1 Norfolk Naval Shipyard

1.3 Identification:

1.3.1 Not applicable

2. REFERENCES:

2.1 Standard Items

2.2 Occupational Safety and Health Regulations (OSHA) 29 CFR

2.3 Environmental Protection Regulations of 40 CFR

2.4 Department of Transportation (DOT) Regulations of 49 CFR

2.5 Virginia Department of Environmental Quality (DEQ) Hazardous Waste Management Regulations

2.6 OPNAVINST 5100.23, Navy Occupational Safety and Health Program Manual

2.7 Emergency Planning and Community Right to Know Act (EPCRA) of 1986

2.8 Best Management Practices Manual for Shipbuilding and Repair Industry Prepared for the Commonwealth of Virginia, Virginia Water Control Board by Bengtson, DeBell, Elkin & Titus, Ltd

2.9 OPNAVINST 5090.1, Environmental and Natural Resources Program Manual

2.10 S9086-CQ-STM-010/CH-081, Waterborne Underwater Hull Cleaning of Navy Ships

2.11 S9086-VD-STM-010/020/030/CH-631, Volumes 1, 2 and 3, Preservation of Ships

3. REQUIREMENTS:

3.1 The following requirements shall be observed, in addition to the specific requirements of the Job Order, for work accomplished on naval ships and craft located at NNSY.

3.2 REGULATORY CONTACT. No regulatory agencies shall be allowed into the Shipyard without notification to MARMC for submittal to and approval by NNSY Code 106. No information concerning Navy property or operations, or operations performed under contract to the Navy, shall be released to regulatory agencies without the approval of MARMC and NNSY Code 106. No information concerning Navy property or operations, or operations performed under contract to the Navy, shall be released to regulatory

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agencies without the approval of MARMC and NNSY Code 106.

3.3 NNSY OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENT (OSHE) STAFF OVERSIGHT OF OPERATIONS. THE NNSY OSHE DIVISION (Code 106) or it's designated inspectors, shall on occasion inspect the contractor's work areas.

3.3.1 The inspectors will direct control measures, normally via MARMC, if conditions are not consistent with NNSY permits or regulatory requirements.

3.3.2 These control measures may include stoppage of work pending correction of deficiencies and the investigating of mishaps.

3.3.3 Written corrective actions may be required before work can resume. MARMC will coordinate submittal of this documentation and return to work authorization.

3.4 Provide a representative who will serve as an environmental coordinator for the purposes of administering the requirements of this Work Item, including coordinating the work with NNSY and NSSA.

3.4.1 Submit a list with name, address, office and home telephone number of the representative, and one alternate. Submit updates to this list each time representatives are added or deleted.

3.5 PERSONNEL PROTECTIVE EQUIPMENT (PPE). All personnel engaged in working at NNSY shall wear mandatory Personnel Protective Equipment (PPE) in accordance with 2.2 in all areas designated by NNSY. Personnel shall also have personal hearing protection on their person at all times for use in designated noise hazardous areas or when performing noise hazardous tasks. Mandatory PPE includes hard hats, safety glasses, and safety-toed shoes. Each hard hat shall be identified with the name of the respective contractor, and shall have affixed a NNSY provided "contractor" sticker.

3.5.1 In addition, all personnel shall wear additional PPE as appropriate to control hazards of the work being performed.

3.5.2 Unsafe conditions shall be reported to MARMC.

3.6 FIRE PROTECTION. Contractor personnel assigned to a job on a ship within NNSY shall familiarize themselves with the fire and evacuation instructions board located in the vicinity of the ship's gangway. Particular attention shall be made of emergency evacuation signals and best escape routes.

3.6.1 All firewatch personnel shall carry certification of training to include place of training and expiration date.

3.7 SAFETY AND HEALTH REQUIREMENTS FOR CONTROL OF SHIPBOARD NON-ASBESTOS THERMAL FIBER INSULATION AND LAGGING MATERIAL. Prior to performing any insulation work, employ AHERA accredited asbestos inspectors and collect samples for analysis to determine asbestos and/or mineral fiber content and fiber size. Submit a copy of inspection report/analysis to Code 106 and MARMC. For work involving man made vitreous fiber <3 microns in diameter, submit a work plan to Code 106 for review and approval prior to accomplishment of the work. Personal sampling shall be in accordance with OSHA, and NIOSH requirements. Exposure assessments, regulated work area determination and clearing samples shall be implemented as needed to

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ensure compliance with ACGIH 1998 TLVs in accordance with 2.6.

3.8 HIGH EFFICIENCY PARTICULATE (HEPA) FILTERS, required on vacuum cleaners or ventilation units associated with insulation work, shall be U.L. Class I and DOP (dioctylphalate) tested as follows:

3.8.1 Vacuum cleaners shall be tested within 3 months of use; ventilation units shall be tested within one year of use.

3.8.2 Tested equipment shall have a seal affixed in such a manner that it would be destroyed if the HEPA filter is disturbed.

3.8.3 Equipment shall be retested anytime the HEPA filter is replaced or the seal is broken.

3.8.4 There shall be a tag, sticker, etc., located on the outside of the unit that identifies who performed the DOP test, the date it was tested, the date the certification expires, and the serial number or other unique identifier of the unit tested.

3.9 COMPRESSED AIR SYSTEMS. NNSY compressed air systems are assembled with unique fittings to preclude connection with nonrespirable fluid systems.

3.9.1 Do not remove, substitute or modify these fittings, or perform any maintenance on NNSY installed compressed air systems.

3.10 EMERGENCY RESPONSE SYSTEM. NNSY has a fully capable emergency response system.

3.10.1 Instruct personnel, including subcontractors, assigned to a job within NNSY, upon witnessing flooding, fire, injury to personnel, or any other incident or casualty requiring emergency response, to immediately contact all the below, providing the location and other pertinent details.

Designated representative of vessel's Commanding Officer.

Any NNSY Supervisor/Manager.

NNSY fire department dispatcher (396-3333).

MARMC.

3.11 Accomplish the requirements of 009-09 of 2.1 for a Process Control Procedure (PCP) specific to the work to be performed to support environmental regulation and permit compliance at NNSY.

3.11.1 The PCP shall address the controls and operational actions employed to ensure no adverse environmental impact occurs while performing work at NNSY applicable to the scope of the work being performed. Ensure the subject matters of the remainder of this Work Item are addressed.

3.11.2 Submit an additional copy of the PCP to NNSY Code 106.3 for their review via MARMC.

3.12 SPILL CONTINGENCY AND CONTROL (Oil, Sewage, or Hazardous Substance).

3.12.1 Inform employees/subcontractors to notify NNSY Fire Department 396-3333 immediately upon discovery of any discharge, regardless if contractor generated or by another source.

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Notification shall identify when discharges are contractor generated. In addition to NNSY Fire Department notification, also notify the 970E supervisor (396-5282) of any discharge discovered internal to the ship or the dry-dock.

3.12.2 Submit a list with name, address, office and home telephone number of a 24 hour emergency coordinator and one alternate. Submit updates to this list each time representatives are added or deleted.

3.12.3 Submit a copy of the methods and work practices to be employed to prevent discharges of any volume ashore or to the waters adjacent to NNSY via MARMC.

3.12.4 Accomplish cleanup of all spills caused by any work operations performed by the contractor. Maintain spill cleanup capability comparable to the spill potential of the work operations (i.e., equipment such as spill kits, absorbent pads/booms, spill debris containers, oil-skimmer, etc.).

3.12.4.1 Submit information regarding the discharge to all relevant parties. Identify the command/ship/contractor responsible for the spill.

3.12.4.2 Submit a report to NNSY OSHE, within three calendar days subsequent to a spill of hazardous material or POL, containing the spill date and time, material spilled, location/volume/cause of spill, clean up efforts performed, agencies notified, copies of sitreps or other messages, and corrective actions.

3.13 PUMPING OPERATIONS. (liquid transfer to barge/tank or vice versa or any combinations).

3.13.1 Provide continuous communications between pump tender and barge/tank tender to allow immediate shutdown if upset occurs during pumping/transfer operations.

3.13.2 Methods for gauging compartment volume in barge/tank shall ensure maximum volume to be 90 per cent of capacity.

3.13.3 Tag pump lines to indicate contractors name, where line(s) are originating from (i.e., ship tank/void) and pump number.

3.14 FUEL TRANSFER REQUIREMENTS AT NNSY. All operations shall be performed in such a manner that no fuel is discharged overboard or pier-side.

3.14.1 Provide 24 hour (minimum) advance notification during normal shipyard working hours for day shift, via MARMC, to the following NNSY organizations:

Environmental Division Code 106.33 396-7231, Ext. 111 (O'Neill) or Ext. 207 (Webb).

Fire Department Code 1125 (396-3338/3335).

Spill Response Code 970E (620-1551, 396-1760, 1780).

3.14.2 Request, via MARMC, to have NNSY Code 970 stage a skimmer and ensure personnel with spill recovery equipment are able to respond to perform spill cleanup.

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3.14.3 Request, via MARMC, to have NNSY Code 970 ensure that floating booms are in place and in a condition to contain fuel in the event of an overboard discharge. Fuel transfer shall not proceed in the absence of the booms without the specific approval of MARMC and NNSY Code 106.

3.14.4 Verify that the ship has a Shipboard Spill Contingency Plan as required by Paragraph 19-9-2-10 of 2.9.

3.14.5 Verify that tanks receiving fuel have operational level and alarm systems prior to commencing fuel transfer. Each tank level shall be continuously monitored while it is being filled with fuel. Remote tank level indicators shall be used as the primary method for obtaining tank levels.

3.14.6 Develop check off lists and procedures for use prior to and during commencement of fuel transfer. Using the lists and procedures, accomplish the following.

3.14.6.1 Double-check all transfer system valves and ensure each part of the transfer system is aligned to allow the flow of oil and each part of the transfer system not necessary for the transfer operation is securely blanked or shut off.

3.14.6.2 Accomplish integrity checks of all hoses and fittings to ensure against leaks or breaks. Each transfer hose shall be free from kinks, bulges, gouges, cuts, slashes or any other defect that penetrates the first layer of hose reinforcement ("reinforcement" means the strength members of the hose, consisting of fabric, cord and/or metal) material. All coupling, blanks and pressure tight fittings shall be properly made up and tightened to prevent leakage.

3.14.6.3 Verify the vessel's moorings are satisfactory for all expected conditions of surge, current, and weather are long enough to allow adjustments for changes in draft, drift, and tide during the transfer operation.

3.14.6.4 Transfer hoses and loading arms shall be long enough to allow the vessel to move to the limits of its moorings without placing strain on the hose, loading arm, or transfer piping system.

3.14.6.5 Support each transfer hose to prevent kinking or other damage to the hose and strain on its coupling.

3.14.6.6 Blank off the end of each hose and loading arm that is not connected for the transfer of oil or hazardous material using closure devices.

3.14.6.7 Attach the transfer system to fixed connections on the vessel and the transfer facility except when a vessel is receiving fuel. When vessels are receiving fuel an automatic back-pressure shutoff nozzle may be used.

3.14.7 Conduct a conference with the person in charge of transfer operations on the transferring vessel or facility and the person in charge of transfer operations on the receiving vessel of facility, to ensure that each person understands the following details of the

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transfer operation.

The identity of the product to be transferred.

The sequence of transfer operations.

The transfer rate.

Emergency procedures.

Discharge Containment procedures.

Discharge reporting procedures.

Watch or shift arrangement.

Transfer shutdown procedures.

Mutual agreement to begin the transfer operation.

3.14.8 During the transfer operation, maintain continuous communications, observe hoses for leaks, and, if leaks are noted, immediately cease transfer operations and make the appropriate notifications.

3.15 Waste Hazardous Material/Hazardous Waste (WHM/HW) ACCUMULATION,DISPOSAL AND COMPLIANCE. All HW generated at NNSY shall be handled, stored and transported in accordance with NNSY's HW Permit. To ensure compliance, the requirements of this section shall be strictly adhered to.

3.15.1 All employees who handle , store, or transport, HM/HW shall be trained for their respective functions as required by federal and state regulations of 2.2 through 2.5.

3.15.2 All HW and PCB waste generated at NNSY will be disposed of by NNSY Code 106.3 using NNSY's EPA ID number except as stated in the below EXCEPTION. (SEE NOTE 4.1).

3.15.2.1 EXCEPTION: NNSY will not dispose of HM/HW arising from any action of the contractor not consistent with proper performance of work within the scope of this contract. For example, waste generated as a result of poor HM management and procedures. All wastes not arising from the proper performance of work within the scope of this contract are the sole responsibility of the contractor.

3.15.3 Waste Hazardous Material - (WHM) is defined by NNSY as a hazardous material with no future use. These wastes are not hazardous waste in accordance with the regulations and a careful assessment must be made to ensure these materials are disposed of properly. WHM cannot be disposed of in any NNSY dumpsters.

3.15.3.1 Collect and dispose of all WHM (other than HW) in suitable contractor furnished containers. Ensure that this waste is disposed of in accordance with all applicable federal, state, and local requirements. If shipping papers are required for WHM transport, furnish a copy of all shipping documents for waste shipped from NNSY Code 106.321 via MARMC, within 30 days of removal from the shipyard.

3.15.4 Waste Analysis.

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3.15.4.1 Properly identify waste so that the proper Department of Transportation (DOT) shipping name can be determined for disposal. Should proper waste identification require chemical analysis, the contractor is responsible for the analysis. All analysis shall be provided to NNSY (Code 106.321), via MARMC, when the material is to be picked up for disposal.

3.15.4.2 Upon receiving knowledge, based on analysis results or other sources, that a HW was generated, take immediate actions to ensure compliance with this Work Item. Actions shall be complete, to be in full compliance, within 3 days of generation or identification of a HW.

3.15.4.3 As soon as each drum/container is full, or the process generating the waste is complete, accomplish a chemical analysis to properly identify waste so that the proper Department of Transportation (DOT) shipping name can be determined for disposal. Submit a copy of all analysis results to NNSY (Code 106.321), via MARMC.

3.15.5 Storage. All storage areas for HM/HW shall be approved by NNSY Code 106.321 (396-1795) prior to use. All HM/HW accumulated at NNSY shall be stored in approved accumulation area.

3.15.5.1 Conduct weekly environmental compliance inspections of the job site, including all containers, using an environmental compliance checklist provided by Code 106.321. Submit a copy of the completed checklist to NNSY Code 106.321 via MARMC.

3.15.6 Packaging/Containerizing Wastes.

3.15.6.1 Properly package all waste in accordance with Federal, State, and Local regulations of 2.3 and 2.4.

3.15.6.2 Properly mark all waste in accordance with Federal, State, DOT and Local Regulations.

3.15.6.3 Use appropriate NNSY Hazardous waste labels to identify hazardous waste.

3.15.6.4 Control all generated waste in non-leaking containers compatible with the waste.

3.15.6.5 Keep containers closed at all times except when removing waste.

3.15.7 Containers.

3.15.7.1 Empty metal cans, drums, or containers with no free-flowing liquid or residue of RCRA listed wastes can be recycled as scrap metal by the contractor.

3.15.7.2 Solidified residues over 1/4 inch deep inside containers will not be picked up for recycling and shall be disposed of in accordance with Federal, State and local requirements.

3.15.7.3 Containers with listed waste residues over the EPA specified amount shall be disposed of in accordance with Federal, State and Local requirements by NNSY.

3.15.8 Transfer of Solids. Any container-to-container transfer of

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paint waste debris, or scraping/grinding debris shall be conducted in a manner to minimize the possibility of spills and releases to the environment.

3.15.9 HW Turn In for Disposal.

3.15.9.1 Prepare HW for turn in.

3.15.9.2 Transfer HW to a storage site under the control of an NNSY trained Environmental Coordinator approved by NNSY Code 106.322 within three days of process completion or accumulation in excess of 55 gallons.

3.15.10 HW Manifests/Shipping Documents For Waste Shipped by the Contractor. (This shall apply only as applicable to the "EXCEPTION" of 3.16.2).

3.15.10.1 Submit copies to Code 106.321 via MARMC of all Department of Transportation (DOT) manifests and associated forms at time of shipment and a copy of the return manifests within 30 days of receipt by the owner or operator of disposal facility to MARMC if required.

3.15.10.2 Submit a copy of the disposal certificate to Code 106.321 via MARMC within 100 days of receipt by the owner or operator of the disposal facility or 30 days prior to the completion of the contract.

3.16 CONTROL AND REPORTING OF HAZARDOUS MATERIAL USAGE. NNSY must report all HM storage and usage on shipyard property per the requirements of 2.7. Contractor information provided in accordance with this section is required to support NNSY reporting. Since NNSY must compile data for all work performed at NNSY disregard threshold reporting quantities for reports submitted for this section.

3.16.1 Submit to NNSY Code 106.21, via MARMC, a Material Safety Data Sheet (MSDS) for all hazardous materials, as defined in section 1200 of 2.2, brought into NNSY. The MSDS shall be delivered prior to the material entering NNSY.

3.16.2 Submit a report listing of MSDS's grouped by hazard category, with amounts planned for use at NNSY, to NNSY Code 106.31 via MARMC.

3.16.3 NNSY Code 106 will review the MSDS's and report for chemicals prohibited at NNSY (e.g. Methylene Chloride) and to ensure paints meet the Hazardous Air Pollutant (HAP) limits of the NNSY Clean Air Act Title V Permit.

3.16.4 Ensure labels on HM containers are not removed or defaced. Each container of hazardous materials shall be labeled, tagged or marked with the information below. This label requirement also applies to any container which the hazardous material are transferred.

Identity of the hazardous material(s).

Appropriate hazardous warnings.

The name and address of the chemical manufacturer, importer, or other responsible party.

3.16.5 All HM shall be safely stored while at NNSY in accordance

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with applicable Federal and State regulations.

3.16.6 All HM shall be removed from NNSY when it is no longer needed to support contractor operations

3.16.7 Submit written notification to other employer(s) whose workers may come in contact with the HM. This notification shall include any manufacturers precautionary measures needed to protect employees while in the work place during normal operating conditions.

3.16.8 Submit reports annually, by January 31st, and/or at the completion of the contract, the below information for each Toxic Chemical (TC) manufactured, processed or otherwise used at NNSY during each calendar year.

The Chemical Abstract Service number for the TC.

The amount (in pounds). The report must include both the pure material and the amounts of the TC that appears an ingredient of mixtures such as paints.

Locations and methods of storage at NNSY.

The disposal amount of each reportable TC and the method of disposal.

3.17 WATER POLLUTION CONTROL. Discharges/flushes to

the river, storm drainage system, utility tunnels, sanitary sewerage system, and Dry-dock shall be strictly controlled to maintain compliance with various NNSY operating permits.

3.17.1 Precautions shall be taken to prevent fuels, oils, paint, thinners, paint chips, dust or related debris from entering the river or storm drain system.

3.17.2 Residue from sweeping, compressed air or water pressure cleaning operations shall not be allowed to enter the river or storm drain system.

3.17.3 Liquid discharges/flushes (including potable water) shall not be directed to the river or storm drain system without written approval from NNSY Code 106. Obtain the approval by:

3.17.3.1 Submit to NNSY Code 106.31 a completed Attachment A (Discharge/Flush Authorization Form) at least two weeks in advance of actual work operations that will generate the liquid waste stream desired to be discharged to the river or storm drain system.

3.17.3.2 During the work the liquid to be discharged shall be containerized.

3.17.3.3 Upon completion of the work, sample the liquid and submit the analysis results to Code 106.31 for final discharge approval.

3.17.3.4 If the liquid fails to meet permitted levels for river discharge, Code 106.31 will notify the contractor via MARMC so that an appropriate discharge strategy can developed.

3.17.4 For Sanitary Sewerage System and Collection, Holding,

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Transfer (CHT) system discharges/flushes:

3.17.4.1 Black water/gray water wastes, except those resulting from cleaning or hydroblasting of CHT system piping/tanks, shall be discharged into pierside sanitary sewer system via CHT hoses.

3.17.4.2 Do not place any additives (e.g. chemical cleaning agents) into the ships CHT systems without the written approval from Code 106.3.

3.17.4.3 Do not dump paint, thinner, paint debris, or brush/ roller cleanup residue of any kind into the CHT system, restroom facilities or deep sinks.

3.17.4.4 Black water/gray water wastes resulting from cleaning or hydroblasting of CHT system piping/tanks shall not be directed to the sanitary sewerage system without the written approval from Code 106. Obtain the approval by:

Submit to NNSY Code 106.323 a completed Attachment A (Discharge/Flush Authorization Form) at least two weeks in advance of actual work operations that involve hydroblasting or CHT tank cleaning. Include in this notification the 24-hour telephone number (s) and the name of the contractor's project supervisor.

During the work the liquid to be discharged shall be containerized.

Upon completion of the work, sample the liquid and submit the analysis results to Code 106.323 for final discharge approval.

When analysis indicates that approval for discharge cannot be granted, Code 106.323 will notify the contractor via MARMC. All wastewater not approved for discharge through the NNSY sanitary sewerage system shall be disposed of per procedures for handling liquid waste. Submit a copy of the HRSD permit to Code 106.323 before any wastewater is taken off yard.

3.17.5 Overboard discharges/flushes when in Dry-dock:

3.17.5.1 Any overboard discharges/flushes without a Dry-dock wastewater collecting system (cofferdam system) in place shall meet the same requirements for river and storm drain system discharges/flushes.

3.17.5.2 For overboard discharges of water resulting from industrial processes (cleaning, hydroblasting, flushing, etc.) with the Dry-dock wastewater collecting system (cofferdam system) in place, submit to Code 106.323 a completed Attachment A (Discharge/Flush Authorization Form) at least two weeks in advance of actual work operations.

3.18 PROCEDURES FOR HANDLING LIQUID WASTE.

3.18.1 Remove liquid waste generated as result of contractor operations from ship. Collect liquid waste in contractor furnished barges or tanker trucks. Dispose of the liquid waste via NNSY's Centralized PPU Treatment Facility. All personnel involved in pumping operations to the Centralized PPU Treatment Facility must attend a formal briefing conducted by the 970E (396-5282) supervisor prior to

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beginning work. (SEE NOTE 4.2).

3.18.2 IN THE WATER HULL CLEANING. In the water cleaning evolutions at NNSY are governed by a Virginia Pollutant Discharge Elimination System (VPDES) permit; therefore, Best Management Practices (BMP's) shall be employed by all at NNSY to ensure compliance.

3.18.3 Notify in accordance with 2.8 Code 106.31 via MARMC a minimum of two days prior to any in water hull cleaning operations.

3.18.4 Perform cleaning operations in strict accordance with 2.10.

3.18.5 Station personnel topside to continually observe surrounding surface water for discoloration.

3.18.6 Secure cleaning operations immediately if surrounding surface water discoloration becomes visible from topside, as reported by either the contractor personnel, ship's force, MARMC, or NNSY Code 106.

3.19 HOUSEKEEPING REQUIREMENTS. Remove debris on a daily basis.

3.19.1 Work practices and waste management practices shall be performed such that spent abrasives, paints, solvents, cleaners, anti-corrosive coumpounds, paint chips, scrap metal, trash, garbage, petroleum products or other debris is not released to the environment.

3.19.2 Provide receptacles as necessary to maintain good housekeeping in contractors work areas. These receptacles shall be emptied as necessary to prevent contents from being released to the environment. (SEE NOTE 4.3).

3.19.3 The requirements of ATTACHMENT B are applicable to waste containers provided by the contractor.

3.20 PCB CONTROL, CLEAN-UP AND DISPOSAL.

3.20.1 In addition to the requirements of 009-65 of 2.1, for work involving the control, clean-up and disposal of PCB's, comply with applicable federal and state regulations for PCB work.

3.20.2 Prior to performing PCB work, submit a copy of the control, method of removal and disposal plan required by 3.3 of 009-65 of 2.1 to NNSY Code 106 for review and approval.

3.20.3 Disposal of PCB waste in accordance with HM/HW Accumulation, Disposal and Compliance of this Work Item.

3.21 PAINT REMOVAL.

3.21.1 Methods of control shall be utilized to prevent blast materials, paint chips and paint from being released to the environment. All exterior chipping, blasting and coating work shall be performed with barriers or shrouding enclosing the area being prepared and/or painted. Controls can include, but are not limited to, shrouding, tarpaulins, drop cloths, camels, fixed or floating platforms, barges or other suitable methods used in a manner to maximize capture and provide collection of pollutants or blasting materials being generated.

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3.21.1.1 Work areas shall be cleaned on a regular basis to minimize the possibility that runoff will carry spent abrasives, paints, solvents, cleaners, anti-corrosive compounds, paint chips, scrap metal, trash, garbage, petroleum products, or other debris into the water. Cleanup of areas contributing runoff shall consist of mechanical or manual methods to sweep up and collect the debris. Additionally, dust and paint shall be controlled to minimize the spreading of wind-blown materials. At a minimum, all working platforms must be cleaned at the end of each work shift.

3.21.2 The bottom edge of free hanging barriers shall be weighted, helded in place with magnets, or tied down to hold them in place during all paint removal operations.

3.21.3 Work areas with the potential to release debris into the water during inclement weather shall be cleaned of all abrasive blasting materials and pollutants immediately if weather conditions require abrasive blasting operations to be discontinued.

3.21.4 Work areas shall be cleaned on a regular basis to prevent wind or rainwater runoff from carrying spent abrasives, paints, solvents, cleaners, anticorrosive compounds, paint chips, scrap metal, trash, garbage, petroleum products, or other debris into the water. Cleanup of areas contributing runoff shall consist of mechanical or manual methods to sweep up and collect the debris.

3.21.5 Use of detergents and cleaning compounds for cleaning over or near the water or storm drains is not permitted without prior approval from NNSY OSHE (Code 106.3) at 396-7231. Obtain approval same as for Water Pollution Control requirements of this Work Item.

3.21.6 Hydroblasting operations shall follow the Water Pollution Control requirements of this Work Item.

3.21.7 The use of paint strippers containing "methylene chloride" shall be strictly prohibited.

3.21.8 ABRASIVE BLASTING.

3.21.8.1 Contain abrasive blasting in such a manner as to prevent exposure to unprotected personnel outside of the work area to the dust generated by the operations as well as the hazardous components/toxic coatings that are on the surface to be blasted.

3.21.8.2 Ensure safety and health requirements include proper containment and posting of work area; proper respiratory protection, personal protective equipment (PPE) and training; grounded ventilation and lighting; secured/covered ship's ventilation and accesses affected by the operation.

3.21.8.3 Contain outdoor blasting operations to prevent blasting media and debris from entering the river, storm drain system, or Dry-docks without cofferdam system installed. Containers (e.g. dumpsters or drums to contain spent abrasive blast media) shall be covered when material is not being added or removed.

3.21.8.4 During blasting operations exterior to ship's hull, enclose the area to confine blast dust. Areas considered to be

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exterior to the ship's hull are well decks, hanger bays, plenums, areas that egress to large exterior accesses such as elevators, gates and brows.

3.21.8.5 Enclosures used to contain blast dust shall be in good condition and closed to prevent dust from existing through gaps, rips or other openings while blasting operations are in progress.

3.21.8.6 Halt blasting operations if containment enclosures are damaged or found to be ineffective until effective containment methods are put in place.

3.21.8.7 Cover openings and open areas between decks, (including but not limited to scuppers, railing, freeing ports, ladders, and doorways) if they allow discharge of blast media, paint chips, or dust into the ambient air. (SEE NOTE 4.4).

3.21.8.8 Exhaust ventilation used within abrasive blasting enclosures shall be filtered to remove dust.

3.21.8.9 Halt blasting operations if filtration equipment is ineffective until effective filtration methods are put in place.

3.21.8.10 Conduct all storage, handling and transfer of blast media to and from containers, tanks, vats, drums, and equipment systems in a manner that prevents spills and minimizes the release of dust.

3.21.8.11 Maintain all blasting equipment and dust capture systems in good operating condition and free from leaks.

3.21.8.12 Properly identify, label, package and turn over all waste generated by blasting operations to on-site waste handling personnel in accordance with HM/HW Accumulation, Disposal and Compliance requirements of this Work Item unless otherwise indicated by appropriate sample analysis.

3.21.8.13 If sustained wind speeds exceed 20 MPH, operations shall be frequently reviewed to ensure containment enclosures are effective.

3.21.8.14 Maintain, and submit, by the 5th of each month, a completed copy of ATTACHMENT F (Monthly Air Emmission Source Data) for the prior month, to NNSY Code 106.3 via MARMC for exterior abrasive blasting.

3.21.9 ADDITIONAL REQUIREMENTS FOR THE REMOVAL OF PAINTS CONTAINING LEAD AND CHROMATE.

3.21.9.1 Assume that all paints and primers contain lead and chromium until proven otherwise. Laboratory analysis of paints shall be minimized and used only to confirm the absence of lead or chromium in areas where documentation indicates the surfaces has been coated with non-lead/chromium paints and primers.

3.21.9.2 All negative determinations of lead base paint shall be confirmed by total metals laboratory analysis to be less than .06 per cent by weight Lead and .1 per cent by weight Chrome. Retain analysis documents as part of the painting/preservation log.

3.21.9.3 Prior to the removal of any paint from an area of 10

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square feet or more, collect paint chip samples (a minimum of one square inch, approx. 5 grams) and have analyzed by a certified by the American Industrial Hygiene Association (AIHA) to determine lead content. A minimum of one sample per surface (i.e., bulkhead, overhead, deck, etc.) and color shall be taken and analyzed.

3.21.9.4 If the paint contains lead greater than or equal to 0.06 per cent by weight, implement positive control measures to protect all personnel from lead hazards.

3.21.9.5 Prior to the removal of paint containing lead or Chrome, assess the amount of paint to be removed and plan the project.

Small exterior paint removal projects (those projects for which the Permissible Exposure Level (PEL) is not expected to be exceeded and environmental containment requirements are minimal) shall be accomplished using impact removal tools (i.e., chipping hammers, needle guns or other tools producing chips vice large amounts of dust).

Small paint removal projects in a single compartment utilizing impact tools are restricted to 10 square feet/day.

Large exterior paint removal projects, wherein environmental containment is required and/or PEL is expected to be exceeded, shall be accomplished using large scale labor saving devices (grinders, sanders, blasters, etc.).

Large interior paint removal projects (over 10 square feet/day) shall be accomplished accomplished using labor saving devices.

3.21.9.6 Paint debris contaminated with lead or Chrome shall be treated as HW, controlled, and disposed of in accordance with the HM/HW Accumulation, Disposal and Compliance requirements of this Work Item.

3.21.9.7 Minimize the use of water in the paint removal process, since any used in the operation must be treated as HM.

3.21.9.8 Vacuum debris, clothing and all surfaces in work area with HEPA filtered vacuum. Wipe down all tools, PPE and work area surfaces including tarps, drop cloths, etc.

3.21.9.9 Provide personnel with PPE for mandatory use during paint removal. Ensure that paint debris, HEPA filters, and wipe down rags are separated from coveralls, gloves, and other disposable materials. Place them into plastic bags and label both groups as hazardous waste in accordance with the HM/HW Accumulation, Disposal and Compliance requirements of this Work Item.

3.21.9.10 Mechanical grinding and sanding shall be kept to the absolute minimum with primary reliance on impact tools and authorized chemical paint strippers for paint removal

3.22 SURFACE PREPARATION, PAINT MIXING, SPRAY PAINTING AND PAINT APPLICATIONS.

3.22.1 Lead paint application is strictly prohibited at NNSY with

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the exception of some stripping paints that can only be applied by roller or brush methods. Substitutes for lead based paints are available. Consult 2.11 for acceptable substitutes.

3.22.2 Frequently test all painting evolutions involving spray painting and brush or roller painting with flammable coatings by a competent person to ensure the concentration of flammable vapors remains below 10 per cent of the lower explosive limit. Prohibit hot work, open flames, and operation of spark-producing mechanisms within 25 feet of these painting evolutions.

3.22.3 LIGHTING.

3.22.3.1 Portable lighting shall be explosion proof to a minimum level of Class I, Division I, Group D.

3.22.3.2 Where a ship's fixed lighting system (standard hermetically sealed fluorescent lights with intact, undamaged lens covers) is to be used, protect the lens cover from over spray by using fire retardant paper or polyethylene (Glad or Saran wrap). Take precautions to ensure that the lights will not be turned off or on during spray painting evolution. (SEE NOTE 4.5).

3.22.4 ELECTRICAL.

3.22.4.1 All motors and control equipment operated in the space during the spray painting evolution shall be of the explosion-proof type. Non-operating electrical equipment within the painting area shall be protected from damage.

3.22.4.2 Power cables passing through space shall be free of cracks and worn spots.

3.22.4.3 Spray painting equipment shall be bonded/grounded to the vessel's structure.

3.22.4.4 Electrical junction/receptacle boxes shall have all major openings (i.e., knockout holes, etc.) protected.

3.22.5 Protective Covering. Fire retardant paper is the only material approved for equipment masking.

3.22.6 Ventilation.

3.22.6.1 Explosion-proof exhaust ventilation shall be used during the spray painting evolution.

3.22.6.2 Uncontaminated air shall be used for supply and the exhaust must discharge to the outside, clear of the source of intake air.

3.22.6.3 Ship's ventilation shall not be operated during the spray painting evolution. Cover the accesses to such ventilation to prevent contamination from over spray.

3.22.6.4 Ventilation equipment/ducts shall be grounded/bonded to the vessel's structure.

3.22.7 PAINT AND THINNER TRANSFER, HANDLING AND STORAGE PROCEDURES.

3.22.7.1 Handling and transfer of paints and thinners to and from containers, tanks, vats, drums, and piping systems shall be

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conducted in a manner that minimizes spills and evaporative loss.

3.22.7.2 Spills onto the land or water shall be reported and cleaned up in accordance with the Spill Contingency and Control requirements of this Work Item.

3.22.7.3 Spills of Volatile Organic Hazardous Air Pollutant VOHAP containing materials/wastes shall be cleaned up as quickly as practicable.

3.22.7.4 Spill contaminated clean up materials shall be promptly placed in a properly labeled impervious container (e.g.: plastic bag, closed drum).

3.22.7.5 Paints and solvents shall not be mixed in areas where spillage may cause a release to either the ground or the water unless containment measures are employed. Drip pans, tarpaulins, drop cloths or other protective devices shall be used for all areas where open cans or paint mixing occur. Funnels, or other such devices, shall be used when appropriate to minimize the chance of spills. Spill control and cleanup equipment such as absorbent material, brooms, mops and containers shall be on hand whenever painting operations are conducted.

3.22.7.6 Paint and solvent containing systems (e.g., spray systems) shall be maintained in good order to minimize chance of leaks.

3.22.7.7 Containers (cans, tanks, vats, drums, and piping systems) shall be free of cracks, holes, and other defects.

3.22.7.8 Storage procedures shall be in place to minimize rusting and denting of containers.

3.22.7.9 Containers in storage shall be closed and leak tight and shall remained closed unless materials are being added or removed.

3.22.7.10 The number of paint containers and the volume of paint on floats shall be minimized.

3.22.7.11 Paint or other chemicals shall not be stored or mixed on floating work platforms or vessel decks.

3.22.7.12 Paint and solvent contaminated wastes shall be transferred to a closed container with a tight fitting cover at the end of the work shift.

3.22.7.13 Monthly, or more frequently if conditions indicate, accomplish inspections of the transfer, handling, handling, and storage areas. For each inspection, submit a completed copy of ATTACHMENT G to NNSY Code 106.31 via MARMC. Correct non-compliance discovered.

3.22.8 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) IMPLEMENTATION PLAN FOR SHIPBUILDING AND SHIP REPAIR SURFACE COATING OPERATIONS (40 CFR PART 63).

3.22.8.1 Ship repair operations accomplished at NNSY shall comply with the Ship Repair Surface Coating NESHAP. Use the following compliance procedures for all surface coating

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operations at NNSY.

3.22.8.2 For marine vessel surface coating operations, provide information to NNSY for inclusion in NNSY NESAP reports.

3.22.8.3 Use only NESHAP compliant paints. ATTACHMENT C VOHAP limits for marine coating provides VOC limits for the various categories of paint.

3.22.8.4 NNSY does not intend to manage any marine coatings as low-usage-exempt.

3.22.8.5 Should the need arise for a low-usage-exemption for a particular coating, contact NNSY code 106.31 via MARMC for approval prior to coating usage.

3.22.8.6 RECORD KEEPING PROCEDURES.

VOC CERTIFICATIONS - Certification of the as-supplied VOC content of each batch of marine coating shall be maintained and submitted to NNSY Code 106.31 via MARMC.

Marine coatings shall be managed and issued such that marine coating usage information is maintained.

Personnel issuing marine coating shall maintain usage information on ATTACHMENT E (DAILY USAGE LOG) to provide usage, manufacturer, category and VOC information on marine coatings applied.

By the 5th of each month, submit a completed copy of ATTACHMENT E (Daily Marine Coating Usage Log) for the prior calendar month to Code 106.3 via MARMC.

3.22.8.7 COMPLIANCE OPTION 1, for marine coatings to which thinning solvent (or any other material) will not be added under any circumstance or to which only water is added.

Provide a written certification to NNSY Code 106.31 via MARMC that the supplied VOC content of each coating is in accordance with ATTACHMENT C, VOHAP LIMITS FOR MARINE COATINGS.

Notify personnel responsible for applying such coatings that no thinning solvent may be added to the coating.

Ensure that only marine coatings that are compliant with ATTACHMENT C are available for issuance at paint lockers.

3.22.8.8 COMPLIANCE OPTION 2, for marine coatings to which thinning solvent will be added, a specific waiver for thinner use shall be requested:

Prior to the application of the marine coating to be thinned, a single thinner shall be designated for that marine coating, and the maximum allowable thinning ratio for moderate or cold weather applications shall be calculated. This shall be accomplished by use of ATTACHMENT D, THINNING WAIVER.

Complete Section 1 of ATTACHMENT D and submit to NNSY Code 106.31 via MARMC. NNSY Code 106.31 will complete Section 2 and return it to the contractor via MARMC. This establishes the maximum allowable thinning ratio for this paint and thinner.

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Painters and personnel issuing paints shall be informed of the designated thinner and the maximum allowable thinning ratio.

Monthly, by the 5th of the following month or upon completion of the painting evolution, Section 3 of each active thinning waiver shall be completed and submitted to Code 106.31 via MARMC.

3.22.9 VIRGINIA TITLE V Operating PERMIT (TITLE V) REQUIREMENTS FOR OUTDOOR SPRAY PAINTING UTILIZING CONVENTIONAL AIR ATOMIZED SPRAY PAINT APPLICATIONS. External spray painting at NNSY is regulated by NNSY's Virginia Title V air permit. Areas considered to be exterior to the ship's hull are well decks, hanger bays, plenums, areas that egress to large exterior accesses such as elevators, gates and brows.

3.22.9.1 All paints used in air atomized spray paint operations exterior to the ship's hull, shall receive approval from Code 106.3 prior to use to ensure they are compliant with NNSY AIR Permit limitations.

3.22.9.2 Paint Spray Containment requirements are:

During painting operations exterior to the ship's hull, enclose the area to confine paint overspray.

Exhaust ventilation used within spray painting enclosures shall be filtered to remove spray paint. Halt spray painting operations if filtration equipment is ineffective until effective filtration methods are put in place.

Enclosures used to contain paint spray shall be in good condition and closed to prevent paint spray from existing through gaps, rips or other openings while paint operations are in progress. Halt painting operations if containment enclosures are damaged or found to be ineffective until effective containment methods are put in place. Cover openings and open areas between decks, (including but not limited to scuppers, railings, freeing ports, ladders and doorways) if they allow discharge of paint into the ambient air.

If sustained wind speeds exceed 20 mph, operations shall be frequently reviewed to ensure enclosures are effective in containing dust.

Maintain, and submit by the 5th of each month, a completed copy of ATTACHMENT F (Monthly Air Emmission Source Data) for the prior calendar month to Code 106.3 via MARMC for exterior hull spray painting.

3.22.9.3 Maintain, and submit by the 5th of each month, a completed copy of ATTACHMENT F (Monthly Air Emission Source Data) for the prior calendar month to Code 106.3 via MARMC for the solvents used to clean up spray painting equipment. Record the labor hours spent in actual solvent cleaning of spray painting equipment.

3.22.9.4 All waste generated by the air atomized spray paint and solvent and solvent cleaning operations operations shall be properly identified, labeled, packaged and turned over to on-site waste handling personnel in accordance with HM/HW Accumulation,

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Disposal and Compliance requirements of this Work Item.

3.22.10 TRIBUTLYTIN (TBT) ANTIFOULING MATERIAL CONTROL. Paints containing TBT (sometimes called organotin) shall not be applied at NNSY.

4. NOTES:

4.1 In some rare instances, the unusual nature or volume of a given waste may exceed NNSY's existing disposal capabilities. In such cases, it will be necessary to make special arrangements for the waste prior to the generation of that waste.

4.2 In the event the centralized PPU Facility is not available, MARMC, upon coordination with NNSY, and subject to negotiations, will direct contractor to transport and dispose of liquid waste at a location remote from NNSY. When disposal off-site is directed, provide barge and tug service or tanker truck for transport. Tug and barge movement including location of the barge shall be coordinated with NNSY via MARMC at least 12 hours prior to each event. Process and dispose of the liquid waste in accordance with local, state and federal regulations. Submit to Code 106.323 (396-7231 ext.134), by the 5th of the following month, a completed ATTACHMENT H.

4.3 Attachments A through H are representative of the actual forms.

Electronic copies of the Attachments are available from NNSY/MARMC.

5. GOVERNMENT FURNISHED MATERIAL (GFM):

5.1 LLTM:

1. None.

5.2 PUSH MATERIAL:

1. None.

5.3 KITTED MATERIAL:

1. None.

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