

**BREMERTON NAVAL COMPLEX
BEST MANAGEMENT PRACTICES**

BMPs SPECIFIC TO DRY DOCKS

DD-BMP 1 DRY DOCK CLEANING

- 1) Worker Cleaning: Personnel working in the dry dock shall remove dirt and debris from their work areas at the end of each shift.
- 2) Project Cleaning: Each project shall have a cleaning crew assigned to maintain the overall cleanliness of the dry dock. This cleaning crew will inspect the dry dock weekly and clean any buildup of dirt and debris. The inspection will include the dock floor, troughs, and sediment traps. The cleaning crew will use the appropriate tools including vacuums, sweepers, floor scrubbers, pressure washers, etc. as outlined IEI 248.37. Wet methods of cleaning (pressure washing or fire hosing) require the approval by Code 106.3 and will include the collection and treatment of the wash water.
- 3) Cooling Water Discharge Cleaning: Personnel must notify Code 106ESH, Code 980, and Shop 99 prior to discharging cooling water to the dry dock floor. Prior to discharging cooling water, the dock shall be thoroughly cleaned and inspected. Portions of the dock floor may be cleaned and approved for discharging cooling water, but only if cooling water draining from that section of floor is aligned to bypass the Process Water Collection System (PWCS).
- 4) Pre-Flood: At the end of a project, the dock shall be thoroughly cleaned and inspected prior to flooding. Code 106.3 will approve flooding by signing the dry dock flooding prerequisite list. The cleaning will meet the requirements of IEI 248.37 as follows:
 - a) Sweep, vacuum, and/or shovel to remove the majority of debris from the dock floor.
 - b) Pressure-wash or fire hose the dock floor, troughs, and keel blocks. Wastewater generated must be collected and treated.
 - c) Remove any remaining material from troughs.
 - d) Dewater and remove accumulated sediment from traps.
- 5) Post-Flood Cleaning: Following dewatering the dock may need to be cleaned based on the amount of bay silt deposited in the dock, the capabilities of the PWCS and the requirements of the project. Following dewatering the PWCS shall be placed in automatic as soon as possible. Before the PWCS can be placed on-line, vessel cooling water must be routed to the drainage system by installing hull adapters and hoses.
 - a) Reroute cooling water from vessel sea chests to the dry dock drainage system within 7 days of docking and before starting any industrial work that could put waste on the dock floor including pressure washing of the hull, cutting, blasting, etc.
 - b) The PWCS can be used in automatic mode to collect hull and floor wash down water using a fire hose with Code 106.3 approval, and if the PWCS can discharge water to the bay, sewer, or tank based on turbidity.

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DD-BMP 2 MATERIAL STORAGE AND HANDLING

- 1) Liquid Oil Hazardous Substance (OHS): Containers of liquid materials (e.g., fuels, paints, oil, antifreeze, and solvents), shall be stored with tight fitting lids. In addition, containers 55 gallons or greater shall be stored within secondary containment. (PSNS&IMF INST 5090.9)
- 2) Sandblast grit, material contaminated with petroleum products, metal shavings, zinc anodes, welding debris, lead, copper wire, bronze, and brass shall be covered, whether they are in bins or on pallets.
- 3) Use drip pans, secondary containment, or other protective devices at hose connections when transferring oil, fuel, solvent, oily wastewater, and paint. (PSNS&IMF 5090.41)
- 4) Immediately repair, replace, or isolate leaking connections, valves, pipes, hoses, carrying wastewater, fuel, oil, or other hazardous fluids.

DD-BMP 3 CONTAINMENT AND CONTROL OF DUST AND OVERSPRAY

- 1) Painting
 - a) Spray application of copper antifouling paint shall be accomplished in a manner that contains overspray and keeps it from mixing with water on the dock floor.
 - b) Roller and/or brush application of antifouling paint shall include the use of tarps or area containments positioned underneath the work area as needed to prevent antifouling paint from mixing with water on the dock floor.
 - c) Requirements for spray painting with products other than antifouling paints are in the latest revision to PSNS&IMFINST 5090.10, Air Pollution and Control Plan.
- 2) Paint Removal and Surface Preparation
 - a) Exterior abrasive-blasting operations shall be conducted and controlled in a manner to prevent material from interacting with and contaminating stormwater. Best available technology will be used with good work practices to accomplish this goal. Methods may include containments, vacuum attachments, dust reducing media, or other engineered methods. When ventilated enclosure is used, exhaust shall be filtered to capture particulates.
 - b) Wastewater generated during hydro-blasting shall be collected and treated.
- 3) Exterior activities that generate pollutants, (e.g., metal particles, saw dust, paint chips, slag from hot work processes) shall be contained to prevent the discharge of materials to the dry dock drainage system. Appropriate containment methods are placing a tarp on the ground, using curtains or screens placed around the work area, localized filtered ventilation, using shrouded tools, or ensuring the material is swept up so it is not washed to the drainage system. When these pollutant generating activities occur exterior to the hull in an enclosure that is equipped with ventilation, exhaust must be filtered to capture particulates.

DD-BMP 4 EQUIPMENT PREVENTIVE MAINTENANCE

- 1) Leaks from equipment found in a dry dock shall be contained using a drip pan or absorbent.

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- 2) Leaking equipment shall be repaired by end of shift or removed from the dry dock.

DD-BMP 5 SPILL CONTROL

- 1) Unless authorized by Code 106.32 in accordance with IPI 0505-903, do not discharge anything to the dry dock floor or the dry dock drainage system.
- 2) Utilize tarps, secondary containments or other protective devices during operations, which could spill significant materials (e.g., liquid hazardous materials, wastes, wastewater, and fuels) on the dry dock floor.
- 3) Mix paints and solvents in a cofferdam [secondary containment] designed to prevent spills to the dry dock floor.
- 4) Equipment and supplies must be on-hand for the control and clean up of liquid or debris spills. Examples of items you will need in a spill kit include drop cloths, absorbents, rubber mats, tape, tarps, brooms, or vacuums. Design your spill kit for the material being used.

DD-BMP 6 SOLID WASTE RECEPTACLES

- 1) Solid waste receptacles shall be placed inside the dry dock to promote the proper disposal of waste.
- 2) Solid waste containers shall be covered. Waste containers equipped with drains shall have drains plugged.
- 3) Solid waste containers shall be closed at all times except when waste is being added.

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STORMWATER BMPs SPECIFIC TO AREAS OUTSIDE OF DRY DOCKS

BMP 1 YARD CLEANUP

- 1) Responsible shops, building managers, and cleanliness zone managers shall conduct monthly cleanliness inspections of outdoor areas. Remove debris to minimize loss into Sinclair Inlet or the storm drain system.
- 2) Do not clean paved areas, equipment, buildings etc. using wet methods (hosing down) without approval from Code 106.3. (See BMP 10.)

BMP 2 MATERIAL STORAGE AND HANDLING

- 1) Liquid Oil and Hazardous Substance (OHS): Containers that hold OHS liquids (e.g., fuels, paints, oil, antifreeze, and solvents) shall be stored with tight-fitting lids away from storm drains. In addition, containers 55 gallons or greater shall be stored in secondary containment. (PSNS&IMF INST 5090.9E)
- 2) Landscaping Supplies: Containers of granulated or liquid materials which have the potential of adding pollutants to water (e.g., fertilizer, pesticides, etc.) shall be stored inside or under cover. Protect the material from stormwater contact.
- 3) Construction and Industrial Debris: Cover and contain stockpiles of raw materials and debris (e.g., soil, deicers, sandblast grit etc.). The covers or other methods to prevent exposure to stormwater running into drains must be in place at all times when work with the stockpiles is not occurring. Construction areas of greater than 1 acre are required to have a general stormwater permit and their own SWPPP. The BMPs in the construction SWPPP shall be equally sufficient to prevent pollutants from mixing with stormwater and entering the storm drains.
- 4) Sandblast grit, material contaminated with petroleum products, metal shavings, zinc anodes, welding debris, lead, copper wire, bronze, and brass shall be covered, whether they are in bins or on pallets.
- 5) Conduct regular inspections of storage areas so that leaks and spills are detected as soon as possible. Clean up all spills and leaks immediately.
- 6) Fuel tanks shall not be stored or used on piers. (See 33 CFR 154.735 and PSNS&IMF 11320.1.)

BMP 3 CONTAINMENT AND CONTROL OF DUST AND OVERSPRAY

- 1) Activities that generate pollutants, (e.g., metal particles, saw dust, paint chips, slag from hot work processes) shall be contained to prevent the discharge of these materials into storm drains. Appropriate containment methods are placing a tarp on the ground, or using curtains or screens placed around the work area, or using vacuum attachments on tools.
- 2) Perform spray paint operations within an enclosure to prevent overspray and spillage, and minimize emission of particulates.
- 3) Rolling or brushing paint shall have tarps positioned underneath the area.
- 4) Exterior abrasive-blasting operations shall be conducted and controlled in a manner to prevent material from interacting with and contaminating stormwater. Best available technology will be used with good work practices to accomplish

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this goal. Methods may include containments, vacuum attachments, dust reducing media, or other engineered methods. Ventilation exhaust shall be filtered to capture particulates.

BMP 4 DRIP PANS AND SECONDARY CONTAINMENT

- 1) Use drip pans or other protective devices at hose connections when transferring oil, fuel, solvent, industrial wastewater, and paint. Immediately repair, replace or isolate leaking connections, valves, pipes, hoses, carrying wastewater, fuel, oil, or other hazardous fluids.
- 2) Use drip pans or other protective devices when making and breaking connections, or during component removal operations.

BMP 5 VEHICLE/EQUIPMENT CLEANING

- 1) Vehicles and equipment may only be washed in designated approved cleaning areas with wastewaters recycled or routed to the sanitary sewer.
- 2) The approved vehicle and equipment wash area within the Bremerton Naval Complex is located at Building 455.

BMP 6 VEHICLE AND EQUIPMENT PREVENTIVE MAINTENANCE

- 1) Government vehicles and equipment must be checked for leaks before use. Vehicles and equipment must be maintained in good condition at all times. Inspect infrequently used vehicles and equipment for leaks routinely.
- 2) Leaking vehicles awaiting maintenance shall be stored under cover or in a designated area with controls to prevent oil from entering the storm drain system.
- 3) Conduct all routine maintenance and repair of vehicles and equipment in a building, covered impervious containment area sloped to prevent run-on of uncontaminated stormwater and runoff of contaminated stormwater, or other C/106.3 approved area for maintenance.

BMP 7 MATERIAL LOADING/UNLOADING

- 1) When loading and unloading liquids and fine granulated materials from trucks and trailers at outdoor loading areas, prevent potential spills to storm drains by using a valved storm drain line, covering drains with a rubber mat, or placing a temporary berm around vulnerable storm drains.
- 2) Loading and unloading areas shall have a stocked spill kit designed for the materials being loaded or unloaded close to the transfer site.

BMP 8 IN/OVER WATER MAINTENANCE

The following requirements apply to over water work such as on a vessel's hull above the waterline and work performed from a pier or floating work platform.

- 1) Surface Preparation BMPs
 - a) Hand preparation, such as scraping, needle gunning, or wire brushing are allowed provided that containment and collection measures are in effect to prevent the introduction of dust, dirt, debris, flakes, chips, drips, oil, or any other pollutants generated from these surface preparation operations from

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being deposited on or entering water. Containments such as tarpaulins, drapes, shrouding, or other protective devices shall be securely fastened to collect materials when applicable. The cleanup of all collected materials shall be conducted as necessary or at least by the end of shift to prevent their release into the environment and entry into waters of the state.

- b) In addition to the above requirements, power tool preparation producing dust or contaminated water such as power sanding, abrasive blasting, grinding, and hydro-blasting must be fully contained, meeting the abrasive blasting requirements of BMP 3.

2) Paint and Coating Application BMPs

- a) Paint application using a roller or brush is allowed provided that all containment, collection, and spill prevention BMPs are in place before any such applications are made.
- b) In addition to the above requirements, spray-paint application must be contained to prevent paint from contacting stormwater or surface waters and meet the spray painting requirements the latest revision to PSNS&IMFINST 5090.10, Air Pollution and Control Plan

3) Floating Work Platforms Used for In-Water Vessel Maintenance BMPs

- a) All necessary precautions should be taken by personnel onboard the float to prevent, liquids (such as paints, cleaning materials, petroleum products) and unsecured materials from entering into the water from the float. Any container of paint or any other liquid product for painting or surface preparation of one gallon or greater must be provided with secondary containment when used onboard a float. All roller pans used on a float must be provided with secondary spill containment. Secondary spill containment capacity is equal to the entire volume of the container plus 10 percent of the volume of that same container.

BMP 9 TREATED LUMBER PRODUCTS

- 1) Treated wood shall only be used when required by PSNS & IMF or higher-level instructions.
- 2) Collect all construction debris including sawdust and drill shavings or dust to prevent entry into the aquatic environment.
- 3) Whenever possible, make cuts and perform machining operations in the shop or under cover.

BMP 10 DISCHARGES INTO STORM DRAINS

- 1) Do not discharge anything other than stormwater to a storm drain unless authorized by Code 106.32 in accordance with PSNS&IMFINST 5090.30 appendix C.
- 2) Routine external building wash down and pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred may be discharged to a storm drain with Code 106 written concurrence. Wash pressure shall be no more than water main pressure, 150 psi.

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BMP 11 OUTDOOR WORK AREAS

- 1) Mix paints and solvents indoors or in a cofferdam designed to prevent spills to Sinclair Inlet or storm drains.
- 2) Equipment and supplies must be on-hand for the control and clean up of liquid or debris spills. Examples of items you will need in a spill kit include drop cloths, absorbents, rubber mats, tape, tarps, brooms, or vacuums. Design your spill kit for the material being used.
- 3) Metal fabrication areas must be constructed to prevent rainwater from contacting the work process and/or debris. Code 106.3 can grant an exemption if the size of the work piece reasonably precludes conducting the work undercover.
- 4) Metal fabrication areas intended for use greater than 1 month must be enclosed. The enclosure shall be constructed such that debris cannot be washed out of the enclosure. Exhaust vents from work areas must be filtered to capture particulate.

BMP 12 SOLID WASTE RECEPTACLES

- 1) Solid waste receptacles shall be placed throughout the facility to promote the proper disposal of waste.
- 2) Solid waste containers shall be covered. Waste containers equipped with drains shall be plugged.
- 3) Solid waste containers shall be closed at all times except when waste is being added.

BMP 13 STORM SEWER SYSTEMS CLEANING

- 1) Inspect catch basins and storm water treatment systems at least yearly.
- 2) Clean oils, debris, sludge, etc., from catch basins, settling/detention basins, oil/water separators, conveyance systems, and storm water treatment systems regularly, to prevent the contamination of stormwater. Clean and maintain stormwater treatment systems per the manufacturers' specifications. Clean catch basins when there is less than 6-inches clearance from the debris surface to the invert of the lowest pipe.
- 3) Label stormwater drains with a warning similar to, "Dump no waste. Drains to the bay."

BMP 14 FUELING OPERATIONS

Mobile fueling shall be accomplished only by trained fueling operators using spill/drip control and reliable fuel transfer equipment. Fueling operating procedures shall be properly signed and dated by the responsible manager, distributed to the operators, and retained in the organization files.

- 1) Locate fueling sites at least 25 feet from the nearest storm drain or cover the storm drains to ensure no inflow of spilled or leaked fuel.
- 2) Spill prevention methods shall be implemented in the mobile fueling process (e.g., spill kit, absorbent pads, drip pans etc.) as required by PSNS&IMFINST 5090.9, Oil and Hazardous Substance (OHS) Spill Prevention Plan.
- 3) Fueling on piers is prohibited. (See 40 CFR part 112.)

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Portable fueling tanks can only be used to fuel other equipment either in a dry dock or onboard a ship, such as on an aircraft carrier flight deck. Portable tanks can not be used to fuel other equipment on the Shipyard's ground level by IPI 0000-913, Portable Gasoline & Diesel Fuel Storage Tanks.