

Sector R

Ship and Boat Building or Repairing Yards Fact Sheet

Fact Sheets include a general discussion of the issues and pollutants specific to each industrial sector, including a summary of the data used to formulate the Multi-Sector General Permit. Fact Sheet topics include:

- Discharges Covered Under the Sector;
- Industry Profile;
- Associated Storm Water Pollutants;
- Pollution Control Options;
- Special Conditions;
- Storm Water Pollution Plan Requirements;
- Monitoring and Reporting Requirements; and
- Numeric Effluent Limitations, if any.

The Fact Sheet is not to be used as the basis for permit compliance. Sector-specific Permit Language, immediately following this Fact Sheet, provides specific detail for permit compliance.

services (SIC code 373). The following is a list of the types of facilities engaged in ship and boat building and repairing services:

a. Ship Building and Repairing (SIC code 3731)—These are establishments primarily engaged in building and repairing ships, barges, and lighters, whether self-propelled or towed by other crafts. The industry also includes the conversion and alteration of ships and the manufacture of off-shore oil and gas well drilling and production platforms (whether or not self-propelled). Examples include building and repairing of barges, cargo vessels, combat ships, crew boats, dredges, ferryboats, fishing vessels, lighthouse tenders, naval ships, offshore supply boats, passenger-cargo vessels, patrol boats, sailing vessels, towboats, trawlers, and tugboats.

b. Boat Building and Repairing (SIC code 3732)—These facilities are primarily engaged in building and repairing boats. Examples include building and repairing of fiberglass boats, motor-boats, sailboats, rowboats, canoes, dinghies, dories, small fishing boats, houseboats, kayaks, lifeboats, pontoons, and skiffs.

When an industrial facility, described by the above coverage provisions of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial

facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of this multi-sector permit are additive for industrial activities being conducted at the same industrial facility (co-located industrial activities). The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Pollutants Found in Storm Water Discharges

Special conditions have been developed for boat and ship building and repairing operations. Common activities at ship and boat yards include: vessel and equipment cleaning fluid changes, mechanical repairs, parts cleaning, sanding, blasting, welding, refinishing, painting, fueling, and storage of the related materials and waste materials, such as oil, fuel, batteries, or oil filters. All of these areas are potential sources of pollutants to storm water discharges. Table R-1 lists pollutants associated with activities that commonly take place at Ship Building and Repairing Facilities (SIC 3731) and Boat Building and Repairing Facilities (SIC 3732).

R. Storm Water Discharges Associated With Industrial Activity From Ship and Boat Building or Repairing Yards

1. Discharges Covered Under This Section

The storm water application regulations define storm water discharges associated with industrial activity at 40 CFR 122.26(b)(14). Category (ii) of this definition includes facilities commonly identified by Standard Industrial Classification (SIC) codes 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285), 29, 311, 32 (except 323), 33, 3441, and 373. The conditions in this section apply to those facilities primarily engaged in ship and boat building and repairing

TABLE R-1.—COMMON POLLUTANT SOURCES AT SHIP AND BOAT BUILDING AND REPAIRING FACILITIES

Activity	Pollutant source	Pollutant
Pressure Washing	Wash water	Paint solids, heavy metals, suspended solids.
Surface Preparation, Paint Removal, Sanding ..	Sanding; mechanical grinding; abrasive blasting; paint stripping.	Spent abrasives, paint solids, heavy metals, solvents, dust.
Painting	Paint and paint thinner spills; spray painting; paint stripping; sanding; paint cleanup.	Paint solids, spent solvents, heavy metals, dust.
Engine Maintenance and Repairs	Parts cleaning; waste disposal of greasy rags, used fluids, and batteries; use of cleaners and degreasers; fluid spills; fluid replacement.	Spent solvents, oil, heavy metals, ethylene glycol, acid/alkaline wastes, detergents.
Material Handling: Transfer Storage Disposal ...	Fueling: spills; leaks; and hosing area	Fuel, oil, heavy metals.
	Liquid Storage in Above Ground Storage: spills and overfills; external corrosion; failure of piping systems.	Fuel, oil, heavy metals, material being stored.
	Waste Material Storage and Disposal: paint solids; solvents; trash; spent abrasives, petroleum products.	Paint solids, heavy metals, spent solvents, oil.
Shipboard Processes improperly discharged to storm sewer or into receiving water.	Process and cooling water; sanitary waste; bilge and ballast water.	Biochemical oxygen demand (BOD), bacteria, suspended solids, oil, fuel.

Sources: Executive Office of the President, Office of Management and Budget, 1987. Standard Industrial Classification Manual 1987. National Technical Information Service Order no. PB 87-100012.
 NPDES Storm Water Group Applications—Part 1 and Part 2. Received by EPA March 18, 1991 through December 31, 1992.
 EPA, Office of Research and Development. October 1991. "Guides to Pollution Prevention the Automotive Refinishing Industry." EPA/625/7-91/016.
 EPA, Office of Research and Development. October 1991. "Guides to Pollution Prevention the Automotive Repair Industry." EPA/625/7-91/016.
 EPA, Office of Research and Development. May 1992. "Facility Pollution Prevention Guide." EPA/600/R-92/088.
 EPA, Office of Water. September 1992. "Storm Water Management for Industrial Activities—Developing Pollution Prevention Plans and Best Management Practices." EPA 832-R-92-006.
 EPA, Office of Water and Hazardous Materials. December 1979. "Draft Development Document for Proposed Effluent Limitations Guidelines and Standards for the Shipbuilding and Repair Industry." EPA/440/1-79/076-b.

University of South Alabama, College of Engineering, September 1992. "Best Management Practices for the Shipbuilding and Repair Industry and for Bridge Maintenance Activities." College of Engineering Report No. 92-2.

Based on the similarities of the facilities included in this sector in terms of industrial activities and significant materials, EPA believes it is appropriate to discuss the potential pollutants at ship and boat building and repairing

facilities as a whole and not subdivide this sector. Therefore, Table R-2 lists data for selected parameters from facilities in the ship and boat building and repairing sector. These data include the eight pollutants that all facilities

were required to monitor for under Form 2F, as well as the pollutants that EPA determined may merit further monitoring.

TABLE R-2.—STATISTICS FOR SELECTED POLLUTANTS REPORTED BY SHIP AND BOAT BUILDING OR REPAIRING YARDS SUBMITTING PART II SAMPLING DATAⁱ (mg/L)

Pollutant Sample Type	No. of Facilities		No. of Samples		Mean		Minimum		Maximum		Median		95th Percentile		99th Percentile	
	Grab	Comp ⁱⁱ	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp
BOD ₅	29	28	51	48	4.4	6.3	0.0	0.0	23.0	138.0	2.3	0.8	17.1	25.5	32.6	67.4
COD	29	28	51	49	73.2	70.0	0.0	0.0	450.0	810.0	53.0	33.0	259.1	264.3	503.9	579.8
Nitrate + Nitrite Nitrogen	29	28	51	49	0.79	0.82	0.00	0.00	6.00	5.00	0.72	0.71	2.36	2.35	4.28	4.22
Total Kjeldahl Nitrogen	29	28	51	49	1.19	2.20	0.00	0.00	3.40	48.00	1.00	0.97	2.57	4.69	3.73	8.67
Oil & Grease	29	N/A	52	N/A	1.0	N/A	0.0	N/A	14.0	N/A	0.0	N/A	5.1	N/A	15.9	N/A
pH	23	N/A	43	N/A	N/A	N/A	4.7	N/A	8.7	N/A	7.3	N/A	8.8	N/A	9.6	N/A
Total Phosphorus	29	28	51	48	0.21	0.86	0.00	0.00	2.20	32.00	0.00	0.06	0.94	1.75	1.98	4.51
Total Suspended Solids	29	27	51	48	92	45	0	0	1200	300	17	10	525	366	2294	1537

ⁱ Applications that did not report the units of measurement for the reported values of pollutants were not included in these statistics. Values reported as non-detect or below detection limit were assumed to be 0.
ⁱⁱ Composite samples.

3. Options for Controlling Pollutants

The measures commonly implemented to reduce pollutants in storm water discharges from boat and ship building and repairing facilities are generally uncomplicated and simple to implement. Table R-3 identifies Best Management Practices (BMPs) associated with various activities that routinely occur at boat and ship building and repair facilities.

TABLE R-3.—COMMON MANAGEMENT PRACTICES FOR STORM WATER POLLUTION PREVENTION AT SHIP AND BOAT BUILDING AND REPAIRING FACILITIES

Activity	BMPs
Pressure washing	Collect discharge water and remove all visible solids before discharging to a sewer system, or where permitted by an individual NPDES permit, to a drainage system, or receiving water. Perform pressure washing only in designated areas where wash water containment can be effectively achieved. Use no detergents or additives in the pressure wash water. Direct deck drainage to a collection system sump for settling and/or additional treatment. Implement diagonal trenches or berms and sumps to contain and collect wash water at marine railways. Use solid decking, gutters, and sumps at lift platforms to contain and collect wash water for possible reuse.
Surface preparation, sanding, and paint removal.	Enclose, cover, or contain blasting and sanding activities to the maximum extent practical to prevent abrasives, dust, and paint chips from reaching storm sewers or receiving water. Where feasible, cover drains, trenches, and drainage channels to prevent entry of blasting debris to the system. Prohibit uncontained blasting or sanding activities over open water. Prohibit blasting or sanding activities during windy conditions which render containment ineffective. Inspect and clean sediment traps to ensure the interception and retention of solids prior to entering the drainage system. Sweep accessible areas of the drydock to remove debris and spent sandblasting material prior to flooding.
Painting	Collect spent abrasives routinely and store under a cover to await proper disposal. Enclose, cover, or contain painting activities to the maximum extent practical to prevent overspray from reaching the receiving water. Prohibit uncontained spray painting activities over open water. Prohibit spray painting activities during windy conditions which render containment ineffective. Mix paints and solvents in designated areas away from drains, ditches, piers, and surface waters, preferably indoors or under a shed. Have absorbent and other cleanup items readily available for immediate cleanup of spills. Allow empty paint cans to dry before disposal. Keep paint and paint thinner away from traffic areas to avoid spills. Recycle paint, paint thinner, and solvents. Train employees on proper painting and spraying techniques, and use effective spray equipment that delivers more paint to the target and less overspray.
Drydock maintenance	Clean and maintain drydock on a regular basis to minimize the potential for pollutants in the storm water runoff. Sweep accessible areas of the drydock to remove debris and spent sandblasting material prior to flooding.

TABLE R-3.—COMMON MANAGEMENT PRACTICES FOR STORM WATER POLLUTION PREVENTION AT SHIP AND BOAT BUILDING AND REPAIRING FACILITIES—Continued

Activity	BMPs
Drydock activities	<p>If hosing must be used as a removal method, collect wash water to remove solids and potential metals.</p> <p>Clean the remaining areas of the dock after a vessel has been removed and the dock raised.</p> <p>Remove and properly dispose of floatable and other low-density waste (wood, plastic, insulations, etc.).</p> <p>Use plastic barriers beneath the hull, between the hull and drydock walls for containment.</p> <p>Use plastic barriers hung from the flying bridge of the drydock, from the bow or stern of the vessel, or from temporary structures for containment.</p> <p>Weight the bottom edge of the containment tarpaulins or plastic sheeting during a light breeze.</p> <p>Use plywood and/or plastic sheeting to cover open areas between decks when sandblasting (scuppers, railings, freeing ports, ladders, and doorways).</p> <p>Install tie rings or cleats, cable suspension systems, or scaffolding to make implementation containment easier.</p>
Nondrydock activities	<p>Hang tarpaulin from the boat, fixed, or floating platforms to reduce pollutants transported by wind.</p> <p>Pave or tarp surfaces under marine railways.</p> <p>Clean railways before the incoming tide.</p> <p>Haul vessels beyond the high tide zone before work commences or halt work during high tide.</p> <p>Place plastic sheeting or tarpaulin underneath boats to contain and collect waste and spent materials and clean and sweep regularly to remove debris.</p> <p>Use fixed or floating platforms with appropriate plastic or tarpaulin barriers as work surfaces and for containment when work is performed on a vessel in the water to prevent blast material or paint overspray from contacting storm water or the receiving water.</p> <p>Sweep rather than hose debris present on the dock.</p>
Engine maintenance and repairs	<p>Maintain an organized inventory of materials used in the maintenance shop.</p> <p>Dispose of greasy rag, oil filters, air filters, batteries, spent coolant, and degreasers properly.</p> <p>Label and track the recycling of waste material (i.e., used oil, spent solvents, batteries).</p> <p>Drain oil filters before disposal or recycling.</p> <p>Store cracked batteries in a nonleaking secondary container.</p> <p>Promptly transfer used fluids to the proper container; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers.</p> <p>Do not pour liquid waste down floor drains, sinks, or outdoor storm drain inlets.</p> <p>Plug floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly.</p> <p>Inspect the maintenance area regularly for proper implementation of control measures.</p> <p>Train employees on proper waste control and disposal procedures.</p>
Material Handling	<p>Store permanent tanks in a paved area surrounded by a dike system which provides sufficient containment for the larger of either 10 percent of the volume of all containers or 110 percent of the volume of the largest tank.</p>
Bulk liquid storage and containment	<p>Maintain good integrity of all storage tanks.</p> <p>Inspect storage tanks to detect potential leaks and perform preventive maintenance.</p> <p>Inspect piping systems (pipes, pumps, flanges, couplings, hoses, valves) for failures or leaks.</p> <p>Train employees on proper filling and transfer procedures.</p>
Material Handling	<p>Store containerized materials (fuels, paints, solvents, etc.) in a protected, secure location and away from drains.</p>
Containerized material storage	<p>Store reactive, ignitable, or flammable liquids in compliance with the local fire code.</p> <p>Identify potentially hazardous materials, their characteristics, and use.</p> <p>Control excessive purchasing, storage, and handling of potentially hazardous materials.</p> <p>Keep records to identify quantity, receipt date, service life, users, and disposal routes.</p> <p>Secure and carefully monitor hazardous materials to prevent theft, vandalism, and misuse of materials.</p> <p>Educate personnel for proper storage, use, cleanup, and disposal of materials.</p> <p>Provide sufficient containment for outdoor storage areas for the larger of either 10 percent of the volume of all containers or 110 percent of the volume of the largest tank.</p> <p>Use temporary containment where required by portable drip pans.</p> <p>Use spill troughs for drums with taps.</p>
Material Handling	<p>Mix paints and solvents in designated areas away from drains, ditches, piers, and surface waters. Locate designated areas preferably indoors or under a shed.</p>
Designated material mixing areas	<p>If spills occur,</p> <p>Stop the source of the spill immediately.</p> <p>Contain the liquid until cleanup is complete.</p> <p>Deploy oil containment booms if the spill may reach the water.</p> <p>Cover the spill with absorbent material.</p> <p>Keep the area well ventilated.</p> <p>Dispose of cleanup materials properly.</p> <p>Do not use emulsifier or dispersant.</p>
Shipboard process water handling	<p>Keep process and cooling water used aboard ships separate from sanitary wastes to minimize disposal costs for the sanitary wastes.</p> <p>Keep process and cooling water from contact with spent abrasives and paint to avoid pollution of the receiving water.</p> <p>Inspect connecting hoses for leaks.</p>

TABLE R-3.—COMMON MANAGEMENT PRACTICES FOR STORM WATER POLLUTION PREVENTION AT SHIP AND BOAT BUILDING AND REPAIRING FACILITIES—Continued

Activity	BMPs
Shipboard sanitary waste disposal	Discharge sanitary wastes from the ship being repaired to the yard's sanitary system or dispose of by a commercial waste disposal company. Use appropriate material transfer procedures, including spill prevention and containment activities.
Bilge and Ballast water	Collect and dispose of bilge and ballast waters which contain oils, solvents, detergents, or other additives to a licensed waste disposal company.

Sources: EPA, Office of Water. 1993. "Guidance Specifying Management Measures for Survey of Nonpoint Pollution in Coastal Waters." 840-B-92-002.

University of South Alabama, College of Engineering. September 1992. Best Management Practices for the Shipbuilding and Repair Industry and for Bridge Maintenance Activities. College of Engineering Report No. 92-2.

NPDES Storm Water Group Applications—Part 1. Received by EPA March 18, 1991 through December 31, 1992.

4. Pollutant Control Measures Required Through Other EPA Programs

EPA recognizes that the Resource Conservation and Recovery Act (RCRA) and the Underground Storage Tank (UST) programs require careful management of materials used at Ship Building and Repairing Facilities and Boat Building and Repairing Facilities.

Under the RCRA program, on September 10, 1992, EPA promulgated standards in 40 CFR Part 279 for the management of used oils that are recycled (57 FR 41566). These standards include requirements for used oil generators, transporters, processors/refiners, and burners. The standards for used oil generators apply to all generators, regardless of the amount of used oil they generate. Do-it-yourself (DIY) generators which generate used oil from the maintenance of their personal vehicles, however, are not subject to the management standards (Subsection 279.20(a)(1)).

The requirements for used oil generators were designed to impose minimal burden on generators while protecting human health and the environment from the risks associated with managing used oil. Under Subpart C of 40 CFR Part 279, used oil generators must not store used oil in units other than tanks, containers, or units subject to regulation under Part 264 or 265 of 40 CFR 279.22(a). In other words, generators may store used oil in tanks or containers that are not subject to Subpart J (Hazardous Waste Tanks) or Subpart I (Containers) of Parts 264/265, as long as such tanks or containers are maintained in compliance with the used oil management standards. This does not preclude generators from storing used oil in Subpart J tanks or Subpart I containers or other units, such as surface impoundments (Subpart K), that are subject to regulation under Part 264 or 265.

Storage units at generator facilities must be maintained in good condition

and labeled with the words "used oil." Upon detection of a release of used oil to the environment, a generator must take steps to stop the release, contain the released used oil, and properly manage the released used oil and other materials (Sections 279.22(b)-(d)). Generators storing used oil in underground storage tanks are subject to the UST regulations (40 CFR Part 280).

If used oil generators ship used oil offsite for recycling, they must use a transporter who has notified EPA and obtained an EPA identification number (Section 279.24).

The technical standards for USTs at 40 CFR Part 280 require that new UST systems (defined as systems for which installation commenced after December 12, 1988) use overflow prevention equipment that will: (1) Automatically shut off flow into the tank when the tank is no more than 95 percent full; or (2) alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high level alarm. The preceding requirements do not apply to systems that are filled by transfers of no more than 25 gallons at one time. Existing UST systems (defined as systems for which installation has commenced on or before December 12, 1988) are required to have installed the described overflow prevention equipment by December 12, 1998.

5. Special Conditions

a. Prohibition of Non-storm Water Discharges. In addition to the prohibitions in part III.A., this section of today's permit does not authorize prohibited non-storm water discharges of wastewaters, such as bilge and ballast water, sanitary wastes, pressure washwater, and cooling water originating from vessels. The operators of such discharges must obtain coverage under a separate NPDES permit if discharged to waters of the U.S. or through a municipal separate storm sewer system. Part III.A.2 of today's

permit does, however, authorize certain non-storm water discharges.

6. Storm Water Pollution Prevention Plan Requirements

The conditions that apply to ship and boat building and repairing facilities build upon the requirements set forth in the front of this fact sheet which are based on the requirements of the September 9, 1992 baseline general permit. The discussion which follows, therefore, only addresses conditions that differ from those baseline conditions.

a. Contents of the Plan

(1) Description of Potential Pollutant Sources. Under the description of potential pollutant sources in the storm water pollution prevention plan requirements, permittees are required to include the location(s) on their facility site map where engine maintenance and repair work, vessel maintenance and repair work, and pressure washing are performed. This requirement is the same as the baseline requirements presented in the front of this fact sheet, but here it is expressed in more appropriate terms for the ship and boat industry. Rather than requiring the location of "storage areas" as in the baseline general permit, this storm water pollution prevention plan specifies that the location of liquid storage areas (i.e., paint, solvents, resins) and material storage areas (i.e., blasting media, aluminum, steel) be shown. In addition, the site map must also indicate the outfall locations and the types of discharges contained in the drainage areas of the outfalls (e.g. storm water and air conditioner condensate). In order to increase the readability of the map, the inventory of the types of discharges contained in each outfall may be kept as an attachment to the site map.

(2) Measures and Controls. Under the description of measures and controls in the storm water pollution prevention plan requirements, this section requires

that all areas that may contribute pollutants to storm waters discharges shall be maintained in a clean and orderly manner. This section of today's permit also requires that the following areas be specifically addressed:

(a) *Pressure Washing Area*—When pressure washing is used to remove marine growth from vessels, the discharge water must be collected or contained and disposed of as required by the NPDES permit for this process water, if the discharge is to waters of the U.S. or through a municipal separate storm sewer. The plan must describe the measures to collect or contain the discharge from the pressure washing area, detail the method for the removal of the visible solids, describe the method of disposal of the collected solids, and identify where the discharge will be released (i.e., the receiving waterbody, storm sewer system, sanitary sewer system).

(b) *Blasting and Painting Areas*—The facility must consider containing all blasting and painting activities to prevent abrasives, paint chips, and overspray from reaching a receiving waterbody or storm sewer system. The plan must describe measures taken at the facility to prevent or minimize the discharge of spent abrasive, paint chips, and paint into the receiving waterbody and storm sewer system. The facility may consider hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris. Where appropriate, a schedule for cleaning storm water conveyances to remove deposits of abrasive blasting debris and paint chips should be addressed within the plan. The plan should include any standard operating practices with regard to blasting and painting activities. Such items may include the prohibition of performing uncontained blasting and painting over open water or blasting and painting during windy conditions which can render containment ineffective.

(c) *Material Storage Areas*—All stored and containerized materials (fuels, paints, solvents, waste oil, antifreeze, batteries) must be stored in a protected, secure location away from drains and plainly labeled. The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The facility must specify which materials are stored indoors and consider containment or cover for materials that are stored outdoors. Above ground storage tanks, drums, and barrels permanently stored outside must be delineated on the site map with a description of the containment measures in place to prevent leaks and spills. The facility

must consider implementing an inventory control plan to prevent excessive purchasing, storage, and handling of potentially hazardous materials. Those facilities where abrasive blasting is performed must specifically include within the plan discussion on the storage and proper disposal of spent abrasive generated at the facility.

(d) *Engine Maintenance and Repair Areas*—The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for engine maintenance and repair. The facility must consider performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluids prior to disposal, prohibiting the practice of hosing down the shop floor where the practice would result in the exposure of pollutants to storm water, using dry cleanup methods, and/or collecting the storm water runoff from the maintenance area and providing treatment or recycling.

(e) *Material Handling Areas*—The plan must describe measures that prevent or minimize contamination of the storm water runoff from material handling operations and areas (i.e., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). The facility must consider covering fueling areas; using spill and overflow protection; mixing paints and solvents in a designated area, preferably indoors or under a shed; and minimizing runoff of storm water to material handling areas. Where applicable, the plan must address the replacement or repair of leaking connections, valves, pipes, hoses, and soil chutes carrying wastewater from vessels.

(f) *Drydock Activities*—The plan must address the routine maintenance and cleaning of the drydock to minimize the potential for pollutants in storm water runoff. The facility must describe the procedures for cleaning the accessible areas of the drydock prior to flooding and the final cleanup after the vessel is removed and the dock is raised. Cleanup procedures for oil, grease, or fuel spills occurring on the drydock must also be included within the plan. The facility must consider items such as sweeping rather than hosing off debris and spent blasting material from the accessible areas of the drydock prior to flooding and having absorbent materials and oil containment booms readily available to contain and cleanup any spills.

(g) *General Yard Area*—The plan must include a schedule for routine

yard maintenance and cleanup. Scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc., must be routinely removed from the general yard area. The facility must consider such measures as providing covered trash receptacles in each yard, on each pier, and on board each vessel being repaired.

These seven areas are the common sources of pollutants in storm water from ship building and repairing and boat building and repairing activities. Based upon Best Management Practices for the Shipbuilding and Repair Industry and for Bridge Maintenance Activities prepared by the College of Engineering at the University of South Alabama, the suggested management measures are commonly used at ship and boat facilities. EPA believes that the incorporation of management practices such as those suggested will substantially reduce the potential for these activities and areas to contribute pollutants to storm water discharges. In addition, EPA believes that these requirements will continue to provide the necessary flexibility to address the variable risk for pollutants in storm water discharges associated with different facilities. Many facilities will find that appropriate management measures are already employed at the facility because they have been required under an existing EPA program.

The preventive maintenance requirements specifically include the routine inspection of sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system. Because of the nature of operations occurring at ship and boat facilities, routine attention needs to be placed on the collection and proper disposal of spent abrasive, paint chips, and other solids.

In addition to the comprehensive site evaluation required under Part XI.R.3.a.(4) of today's permit, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility, at a minimum, on a monthly basis. The following areas shall be included in all inspections: pressure washing areas, blasting and painting areas, material storage areas, engine maintenance and repair areas, material handling areas, drydock areas, and general yard areas. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records shall be maintained.

The purpose of the inspections is to check on the implementation and effectiveness of the storm water

pollution prevention plan. The inspections allow facility personnel to monitor the success or failure of elements of the plan on a regular basis. The use of an inspection checklist is encouraged. The checklist will ensure that all required areas are inspected, as well as help to meet the record keeping requirements.

The permittee is required to identify annual (once per year) dates for employee training. Employee training must, at a minimum address the following areas when applicable to a facility: used oil management; spent solvent management; proper disposal of spent abrasives; proper disposal of vessel wastewaters, spill prevention and control; fueling procedures; general good housekeeping practices; proper painting and blasting procedures; and used battery management. Employees, independent contractors, and customers must be informed about BMPs and be required to perform in accordance with these practices. The permittee is required to consider posting easy to read or graphic depictions of BMPs that are included in the plan as well as emergency phone numbers in the work areas. This practice will enhance employees understanding the pollutant control measures. Unlike some industrial operations, the industrial activities associated with ship and boat building and repair facilities that may affect storm water quality require the cooperation of all employees. EPA, therefore, is requiring that employee training take place at least once a year to serve as: (1) Training for new employees; (2) a refresher course for existing employees; (3) training for all employees on any storm water pollution prevention techniques recently incorporated into the plan; and (4) a forum for the facility to invite independent contractors and customers to inform them of pollution prevention procedures and requirements.

7. Numeric Effluent Limitation

There are no additional numeric effluent limitations beyond those described in Part V.B. of today's permit.

8. Monitoring and Reporting Requirements

a. Analytical Monitoring Requirements. Under the Storm Water Regulations at 40 CFR 122.26(b)(14), EPA defined "storm water discharge associated with industrial activity." The focus of today's permit is to address the presence of pollutants that are associated with the industrial activities identified in this definition and that might be found in storm water discharges. Under the methodology for

determining analytical monitoring requirements, described in section VI.E.1 of this fact sheet, nitrate plus nitrite nitrogen is above the bench mark concentrations for the ship and boat building or repair yards sector. After a review of the nature of industrial activities and the significant materials exposed to storm water described by facilities in this sector, EPA has determined that the higher concentrations of nitrate plus nitrite nitrogen are not likely to be caused by the industrial activity, but may be primarily due to non-industrial activities on-site. Today's permit does not require ship and boat building or repair yards facilities to conduct analytical monitoring for this parameter. Therefore, under the revised methodology for determining pollutants of concern in the various industrial sectors, no analytical monitoring is required by ship and boat building and repairing facilities.

b. Quarterly Visual Examination of Storm Water Quality. Ship and boat building or repair yard facilities shall perform and document a visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted under paragraph (3) below. The examination(s) must be made at least once in each of the following 3-month periods: January through March, April through June, July through September, and October through December. The examination shall be made during daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event.

(1) Examinations shall be made of grab samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for entire permit term.

(2) Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall

include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(3) When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

(4) When a discharger is unable to collect samples over the course of the visual examination period as a result of adverse climatic conditions, the discharger must document the reason for not performing the visual examination and retain this documentation onsite with the records of the visual examinations. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(5) EPA realizes that if a facility is inactive and unstaffed it may be difficult to collect storm water discharge samples when a qualifying event occurs. Today's final permit has been revised so that inactive, unstaffed facilities can exercise a waiver of the requirement to conduct quarterly visual examination.

EPA believes that this quick and simple assessment will allow the permittee to approximate the effectiveness of his/her plan on a regular basis at very little cost. Although the visual examination cannot assess the

chemical properties of the storm water discharged from the site, the examination will provide meaningful results upon which the facility may act quickly. The frequency of this visual examination will also allow for timely adjustments to be made to the plan. If BMPs are performing ineffectively, corrective action must be implemented. A set of tracking or follow-up procedures must be used to ensure that appropriate actions are taken in response to the examinations. The visual examination is intended to be performed by members of the pollution prevention team. This hands-on examination will enhance the staff's understanding of the storm water problems on that site and the effects of the management practices that are included in the plan.

Sector R

Ship and Boat Building or Repairing Yards Permit Language

The Permit Language section contains sector-specific requirements for each industrial sector, including:

- Discharges covered under the sector;
- Special Conditions
- Storm Water Pollution Prevention Plan Requirements;
- Numeric Effluent Limitations, if any; and
- Monitoring and Reporting Requirements.

Further guidance and discussion can be found in the Fact Sheet associated with this sector.

this multi-sector permit are additive for industrial activities being conducted at the same industrial facility (co-located industrial activities). The operator of the facility shall determine which other monitoring and pollution prevention plan section(s) of this permit (if any) are applicable to the facility.

2. Special Conditions

a. Prohibition of Non-storm Water Discharges. In addition to the prohibitions listed in Part III.A of the permit, this section specifically prohibits non-storm water discharges of wastewaters, such as bilge and ballast water, pressure wash water, sanitary wastes, and cooling water originating from vessels, are not authorized by this permit. The operators of such discharges must obtain coverage under a separate NPDES permit if discharged to waters of the United States or through a municipal separate storm sewer system.

3. Storm Water Pollution Prevention Plan Requirements

a. Contents of Plan. The plan shall include, at a minimum, the following items:

(1) Pollution Prevention Team. Each plan shall identify a specific individual or individuals within the facility organization as members of a storm water Pollution Prevention Team that are responsible for developing the storm water pollution prevention plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's storm water pollution prevention plan.

(2) Description of Potential Pollutant Sources. Each plan shall provide a description of potential sources which may reasonably be expected to add significant amounts of pollutants to storm water discharges or which may result in the discharge of pollutants during dry weather from separate storm sewers draining the facility. Each plan shall identify all activities and significant materials which may potentially be significant pollutant sources. Each plan shall include, at a minimum:

(a) Drainage.

(i) A site map indicating the location of the outfalls and the types of discharges contained in the drainage areas of the outfalls, an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in storm water runoff, surface

R. Storm Water Discharges Associated With Industrial Activity From Ship and Boat Building or Repairing Yards

1. Discharges Covered Under This Section

The requirements listed under this section apply to storm water discharges from facilities engaged in ship building and repairing and boat building and repairing⁵ (Standard Industrial Classification (SIC) code 373).

When an industrial facility, described by the above coverage provisions of this section, has industrial activities being conducted onsite that meet the description(s) of industrial activities in another section(s), that industrial facility shall comply with any and all applicable monitoring and pollution prevention plan requirements of the other section(s) in addition to all applicable requirements in this section. The monitoring and pollution prevention plan terms and conditions of

⁵ According to the U.S. Coast Guard, a vessel 65 feet or greater in length is referred to as a ship, and a vessel smaller than 65 feet is a boat.

water bodies, locations where significant materials are exposed to precipitation, locations where major spills or leaks identified under Part XI.R.3.a.(2)(c) (Spills and Leaks) of this section have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling, engine maintenance and repair, vessel maintenance and repair, pressure washing, painting, sanding, blasting, welding, metal fabrication, loading/unloading areas, locations used for the treatment, storage or disposal of wastes; liquid storage tanks, liquid storage areas (i.e., paint, solvents, resins), and material storage areas (i.e., blasting media, aluminum, steel, scrap iron).

(ii) For each area of the facility that generates storm water discharges associated with industrial activity with a reasonable potential for containing significant amounts of pollutants, a prediction of the direction of flow, and an identification of the types of pollutants which are likely to be present in storm water discharges associated with industrial activity. Factors to consider include the toxicity of a chemical; quantity of chemicals used, produced or discharged; the likelihood of contact with storm water; and history of significant leaks or spills of toxic or hazardous pollutants. Flows with a significant potential for causing erosion shall be identified.

(b) *Inventory of Exposed Materials*—An inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of 3 years prior to the date of the submission of a Notice of Intent (NOI) to be covered under this permit and the present; method and location of onsite storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of 3 years prior to the date of the submission of a Notice of Intent (NOI) to be covered under this permit and the present; the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

(c) *Spills and Leaks*—A list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of 3 years prior to the date of the submission of a Notice of Intent

(NOI) to be covered under this permit. Such list shall be updated as appropriate during the term of the permit.

(d) *Sampling Data*—A summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.

(e) *Risk Identification and Summary of Potential Pollutant Sources*—A narrative description of the potential pollutant sources from the following activities if applicable: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities (i.e., welding, metal fabricating); significant dust or particulate generating processes (i.e., abrasive blasting, sanding, painting); loading/unloading areas; and onsite waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g., biochemical oxygen demand, etc.) of concern shall be identified.

(3) *Measures and Controls*. Each facility covered by this permit shall develop a description of storm water management controls appropriate for the facility, and implement such controls. The appropriateness and priorities of controls in a plan shall reflect identified potential sources of pollutants at the facility. The description of storm water management controls shall address the following minimum components, including a schedule for implementing such controls:

(a) *Good Housekeeping*—Good housekeeping requires the maintenance of areas which may contribute pollutants to storm water discharges in a clean, orderly manner. The following areas must be specifically addressed, when applicable at a facility:

(i) *Pressure Washing Area*—When pressure washing is used to remove marine growth from vessels, the discharge water must be permitted as a process wastewater by an NPDES permit.

(ii) *Blasting and Painting Areas*—The facility must consider containing all blasting and painting activities to prevent abrasives, paint chips, and overspray from reaching the receiving water or the storm sewer system. The plan must describe measures taken at the facility to prevent or minimize the discharge of spent abrasive, paint chips, and paint into the receiving waterbody and storm sewer system. The facility may consider hanging plastic barriers or tarpaulins during blasting or painting

operations to contain debris. Where required, a schedule for cleaning storm systems to remove deposits of abrasive blasting debris and paint chips should be addressed within the plan. The plan should include any standard operating practices with regard to blasting and painting activities. Practices may include the prohibition of performing uncontained blasting and painting over open water or blasting and painting during windy conditions which can render containment ineffective.

(iii) *Material Storage Areas*—All stored and containerized materials (fuels, paints, solvents, waste oil, antifreeze, batteries) must be stored in a protected, secure location away from drains and plainly labeled. The plan must describe measures that prevent or minimize contamination of the storm water runoff from such storage areas. The facility must specify which materials are stored indoors and consider containment or enclosure for materials that are stored outdoors. Above ground storage tanks, drums, and barrels permanently stored outside must be delineated on the site map with a description of the containment measures in place to prevent leaks and spills. The facility must consider implementing an inventory control plan to prevent excessive purchasing, storage, and handling of potentially hazardous materials. Those facilities where abrasive blasting is performed must specifically include a discussion on the storage and disposal of spent abrasive materials generated at the facility.

(iv) *Engine Maintenance and Repair Areas*—The plan must describe measures that prevent or minimize contamination of the storm water runoff from all areas used for engine maintenance and repair. The facility must consider performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluids prior to disposal, prohibiting wet clean up practice where the practice would result in the exposure of pollutants to storm water, using dry cleanup methods, and/or collecting the storm water runoff from the maintenance area and providing treatment or recycling.

(v) *Material Handling Areas*—The plan must describe measures that prevent or minimize contamination of the storm water runoff from material handling operations and areas (i.e., fueling, paint & solvent mixing, disposal of process wastewater streams from vessels). The facility must consider covering fueling areas; using spill and overflow protection; mixing paints and

solvents in a designated area, preferably indoors or under a shed; and minimizing runoff of storm water to material handling areas. Where applicable, the plan must address the replacement or repair of leaking connections, valves, pipes, hoses, and soil chutes carrying wastewater from vessels.

(vi) *Drydock Activities*—The plan must address the routine maintenance and cleaning of the drydock to minimize the potential for pollutants in the storm water runoff. The plan must describe the procedures for cleaning the accessible areas of the drydock prior to flooding and final cleanup after the vessel is removed and the dock is raised. Cleanup procedures for oil, grease, or fuel spills occurring on the drydock must also be included within the plan. The facility must consider items such as sweeping rather than hosing off debris and spent blasting material from the accessible areas of the drydock prior to flooding and having absorbent materials and oil containment booms readily available to contain and cleanup any spills.

(vii) *General Yard Area*—The plan must include a schedule for routine yard maintenance and cleanup. Scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc., must be routinely removed from the general yard area. The facility must consider such measures as providing covered trash receptacles in each yard, on each pier, and on board each vessel being repaired.

(b) *Preventive Maintenance*—A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

(c) *Spill Prevention and Response Procedures*—Areas where potential spills which can contribute pollutants to storm water discharges can occur, and their accompanying drainage points shall be identified clearly in the storm water pollution prevention plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan

should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

(d) *Inspections*—Qualified facility personnel shall be identified to inspect designated equipment and areas of the facility on a monthly basis. The following areas shall be included in all inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections shall be maintained.

(e) *Employee Training*—Employee training programs shall inform personnel responsible for implementing activities identified in the storm water pollution prevention plan or otherwise responsible for storm water management at all levels of responsibility of the components and goals of the storm water pollution prevention plan. The pollution prevention plan shall identify how often training will take place, but in all cases training must be held at least annually (once per calendar year). Employee training must, at a minimum, address the following areas when applicable to a facility: used oil management; spent solvent management; proper disposal of spent abrasives; proper disposal of vessel wastewaters, spill prevention and control; fueling procedures; general good housekeeping practices; proper painting and blasting procedures; and used battery management. Employees, independent contractors, and customers must be informed about BMPs and be required to perform in accordance with these practices. The facility should consider posting easy to read descriptions or graphic depictions of BMPs and emergency phone numbers in the work areas.

(f) *Recordkeeping and Internal Reporting Procedures*—A description of incidents (such as spills, or other discharges), along with other information describing the quality and quantity of storm water discharges shall be included in the plan required under this part. Inspections and maintenance activities shall be documented and records of such activities shall be incorporated into the plan.

(g) *Non-storm Water Discharges*.

(i) The plan shall include a certification that the discharge has been tested or evaluated for the presence of

non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the onsite drainage points that were directly observed during the test. Certifications shall be signed in accordance with Part VII.G. of this permit. Such certification may not be feasible if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the storm water pollution prevention plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant sources of non-storm water at the site. A discharger that is unable to provide the certification required by this paragraph must notify the Director in accordance with paragraph XI.R.3.a.(3)(g)(iii) (below).

(ii) Except for flows from fire fighting activities, sources of non-storm water listed in Part III.A.2 (Prohibition of Non-storm Water Discharges) of this permit that are combined with storm water discharges associated with industrial activity must be identified in the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

(iii) *Failure to Certify*—Any facility that is unable to provide the certification required (testing for non-storm water discharges), must notify the Director by [Insert date 270 days after permit issuance] or, for facilities which begin to discharge storm water associated with industrial activity after [Insert date 270 days after permit issuance], 180 days after submitting an NOI to be covered by this permit. If the failure to certify is caused by the inability to perform adequate tests or evaluations, such notification shall describe: the procedure of any test conducted for the presence of non-storm water discharges; the results of such test or other relevant observations; potential sources of non-storm water discharges to the storm sewer; and why adequate tests for such storm sewers were not feasible. Non-storm water discharges to waters of the United States which are not authorized by an NPDES permit are unlawful, and must be terminated.

(h) *Sediment and Erosion Control*—The plan shall identify areas which, due

to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

(i) *Management of Runoff*—The plan shall contain a narrative consideration of the appropriateness of traditional storm water management practices (practices other than those which control the generation or source(s) of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water runoff in a manner that reduces pollutants in storm water discharges from the site. The plan shall provide that measures that the permittee determines to be reasonable and appropriate shall be implemented and maintained. The potential of various sources at the facility to contribute pollutants to storm water discharges associated with industrial activity [see paragraph XI.R.3.a.(2) of this section (Description of Potential Pollutant Sources)] shall be considered when determining reasonable and appropriate measures. Appropriate measures or other equivalent measures may include: vegetative swales and practices, reuse of collected storm water (such as for a process or as an irrigation source), inlet controls (such as oil/water separators), snow management activities, infiltration devices, and wet detention/retention devices.

(4) *Comprehensive Site Compliance Evaluation*. Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but in no case less than once a year. Such evaluations shall provide:

(a) Areas contributing to a storm water discharge associated with industrial activity including, but not limited to, pressure washing area, blasting and sanding areas, painting areas, material storage areas, engine maintenance and repair areas, material handling areas, and drydock area, shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

(b) Based on the results of the evaluation, the description of potential pollutant sources identified in the plan in accordance with paragraph XI.R.3.a.(2) of this section (Description of Potential Pollutant Sources) and pollution prevention measures and controls identified in the plan in accordance with paragraph XI.R.3.a.(3) of this section (Measures and Controls) shall be revised as appropriate within 2 weeks of such evaluation and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than 12 weeks after the evaluation.

(c) A report summarizing the scope of the evaluation, personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph XI.R.3.a.(4)(b) (above) of the permit shall be made and retained as part of the storm water pollution prevention plan for at least 3 years from the date of the evaluation. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the storm water pollution prevention plan and this permit. The report shall be signed in accordance with Part VII.G. (Signatory Requirements) of this permit.

(d) Where compliance evaluation schedules overlap with inspections required under 3.a.(3)(d), the compliance evaluation may be conducted in place of one such inspection.

4. Numeric Effluent Limitations

There are no additional numeric effluent limitations beyond those described in Part V.B. of this permit.

5. Monitoring and Reporting Requirements

(a) *Quarterly Visual Examination of Storm Water Quality*. Facilities shall perform and document a visual examination of a representative storm water discharge associated with industrial activity from each outfall except discharges exempted below. The examination must be made at least once in each designated period [described in (1) below] during daylight hours unless there is insufficient rainfall or snow melt to produce a runoff event.

(1) Examinations shall be conducted in each of the following periods for the purposes of visually inspecting storm water quality associated with storm water runoff or snow melt: January through March; April through June; July

through September; October through December.

(2) Examinations shall be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snow melt begins discharging. The examinations shall document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well lit area. No analytical tests are required to be performed on the samples. All such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term.

(3) Visual examination reports must be maintained onsite in the pollution prevention plan. The report shall include the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

(4) When a facility has two or more outfalls that, based on a consideration of industrial activity, significant materials, and management practices and activities within the area drained by the outfall, the permittee reasonably believes discharge substantially identical effluents, the permittee may collect a sample of effluent of one of such outfalls and report that the examination data also applies to the substantially identical outfall(s) provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. In addition, for each outfall that the permittee believes is representative, an estimate of the size of the drainage area (in square feet) and an estimate of the runoff coefficient of the drainage area [e.g., low (under 40 percent), medium (40 to 65 percent), or high (above 65 percent)] shall be provided in the plan.

(5) When a discharger is unable to collect samples over the course of the monitoring period as a result of adverse

climatic conditions, the discharger must document the reason for not performing the visual examination. Adverse weather conditions which may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.).

(6) When a discharger is unable to conduct visual storm water examinations at an inactive and unstaffed site, the operator of the facility may exercise a waiver of the monitoring requirement as long as the facility remains inactive and unstaffed. The facility must maintain a certification with the pollution prevention plan stating that the site is inactive and unstaffed so that performing visual examinations during a qualifying event is not feasible.