

STORMWATER POLLUTION PREVENTION PLAN



1850 Eller Drive

Fort Lauderdale, Florida 33316

OCTOBER 30, 2018

CHANGE OF INFORMATION PAGE

Date of Change	Revision Number	Sections of Document Changed	Nature of the Change
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TABLE OF CONTENTS

CHANGE OF INFORMATION PAGE	II
TABLE OF CONTENTS.....	III
SIGNATORY CERTIFICATION	V
1.0 INTRODUCTION	1
2.0 FACILITY DESCRIPTION	2
2.1 Introduction.....	2
2.1.1 Northport.....	3
2.1.2 Midport.....	3
2.1.3 Southport.....	4
2.2 PEV Tenants.....	4
2.2.1 Primary PEV Tenants	4
2.2.2 PEV Tenants Known to be Currently Managing Their Own Stormwater Permitting	5
2.3.1 Northport Stormwater Flow	6
2.3.2 Midport Stormwater Flow.....	6
2.3.3 Southport Stormwater Flow.....	7
3.0 DESCRIPTION OF POTENTIAL POLLUTION SOURCES	8
3.1 Significant Materials Stored	8
3.2 Methods of On-Site Storage.....	9
3.3 Potentially Exposed Materials	9
3.4 Receiving Body of Water.....	10
4.0 CERTIFICATION OF NON-STORMWATER DISCHARGES	11
5.0 STORMWATER DATA.....	13
5.1 Total Maximum Daily Load (TMDL) Determination Process	13
6.0 STORMWATER MANAGEMENT CONTROLS.....	15
6.1 Non-Structural Controls	15
6.1.1 Pollution Prevention Team.....	15
6.1.2 Inspections and Preventive Maintenance.....	16
6.1.3 Good Housekeeping	17
6.1.4 Spill Prevention and Response.....	18
6.1.5 Employee Training.....	18
6.1.6 Comprehensive Site Compliance Evaluation.....	19
6.1.7 Recordkeeping.....	19
6.2 Structural Controls	19
6.3 Emergency Stormwater Discharges from the Bulk Fuel Storage Facilities	20

FIGURES

Figure 1	Site Location/Area Drainage Map
Figure 1T	Site Diagram of Tenant Grids and Leases
Figure 2	Site Diagram of Northport
Figure 3	Site Diagram of Midport
Figure 4	Site Diagram of Southport
Figure 5	Bulk Fuel Storage Facilities

APPENDICES

Appendix A	FDEP Multi-Sector Generic Permit and NOI
Appendix B	Non-Stormwater Discharge Assessment and Certification
Appendix C	General BMPs
Appendix D	Bulk Fuel Storage Facilities BMPs
Appendix E	Comprehensive Site Compliance Evaluation

STORMWATER POLLUTION PREVENTION PLAN
SIGNATORY CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Port Everglades – Fort Lauderdale, Florida

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Erik Neugaard, Environmental Program Manager
Broward County, Port Everglades
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November 1, 2018

1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (*"SWPPP" or "the Plan"*) was developed to minimize the potential discharge of pollutants in stormwater from Port Everglades (*"PEV" or "Facility"*) located in Broward County, Florida. This SWPPP will supersede any SWPPP or amendments completed for this facility dated prior to date of this SWPPP. The SWPPP was prepared in general accordance with the U.S. Environmental Protection Agency (*"USEPA"*) guidance document "Stormwater Management for Industrial Activities, Developing Pollution Prevention Plans, and Best Management Practices" (September 1992) and USEPA guidance document "Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators" (February 2009). The Plan has been structured to comply with the requirements of the National Pollutant Discharge Elimination System (*"NPDES"*) for stormwater discharges. A copy of the Multi-Sector Generic Permit (*"MSGP"*) is provided in Appendix A.

The SWPPP identifies potential sources of pollution that may affect the quality of stormwater discharges associated with industrial activities, and presents management practices that will be used at the Facility for reduction of pollutants in stormwater discharges. The Facility conducted a major stormwater study and master planning project that also resulted in the production of the previous version of this SWPPP. This Plan complements the implementation of standard operating procedures currently in place at PEV. The known potential sources of pollution at PEV are characterized as "Significant Materials". All known Significant Materials as defined in 40 CFR 122.26 (b)(12) at PEV are discussed in the Plan, as well as their location at the Facility.

The SWPPP will be retained on-site and made available to the USEPA, state, and local agencies, Facility tenants, or the public, upon request. This Plan should be considered a "living document." Therefore, it may be amended from time to time, if: 1) material conditions at the Facility change; or 2) the Facility is not in compliance with conditions of its permit or has not achieved the general objectives of controlling pollutants in stormwater drainage.

2.0 FACILITY DESCRIPTION

2.1 Introduction

The Port Everglades facility was established as a deep water harbor in 1927. General cargo includes, but is not limited to, shipping containers, steel products, roll-on/roll-off cargo, cement, and various other dry bulk cargos. Containerized cargo service constitutes the primary part of PEV's cargo base. PEV also handles bulk commodities that include aggregate, cement, gypsum, petroleum, and tallow. Break bulk cargo consists primarily of lumber, steel, and wood products. PEV is comprised of numerous buildings and facilities that serve a wide range of shipping related and non-shipping functions. PEV tenants include but are not limited to various shipping services, freight handling, and construction materials companies. Significant Materials at the Facility may include cement, engine oil, hydraulic oil, used oil, various metals, construction materials, tires, and waste.

The Facility is located in Broward County, Florida with operational offices at 1850 Eller Drive, Fort Lauderdale, Florida 33316 (Latitude: 26°4'53.93", Longitude: -80°7'14.00"). PEV is situated on approximately 2,200 acres located on the Intracoastal waterway ("*ICW*") north of the Dania Cut Off Canal. The attached Figure 1 is a Site Location and Drainage Area Map. Stormwater run-off at PEV flows to numerous stormwater inlets located throughout the Facility. The stormwater is then directed to outfalls that discharge both directly and indirectly into the *ICW* or the Dania Cut Off Canal. There are numerous exfiltration trenches along the Facility's collection system, and a series of stormwater retention/detention ponds located along the southwestern PEV boundary. Overflow from these ponds discharges into the Dania Cut Off Canal.

To reduce the amount of sediment and debris in the Facility's stormwater run-off, best management practices ("BMPs") are implemented at stormwater inlets. PEV is divided into three general operational areas: Northport, Midport, and Southport. Figures 2, 3, and 4 consists of enlarged areas of Figure 1 that generally depict Northport, Midport, and Southport. Each of these areas and related operations will be discussed separately in the following sections.

2.1.1 Northport

Northport encompasses the area from 17th Street South to Pier 1, and is depicted in Figure 2. Facilities in Northport include the Broward County Convention Center, 3 cruise ship terminals, and the PEV Public Works facility. The berths associated with Piers 1 and 2 are primarily used for the loading/off-loading of break bulk cargo and the off-loading of refined petroleum products.

The refined petroleum products are off-loaded at designated stations located at berths 7, 9, and 13. The off-loading stations are within a secondary containment structure and are covered. South Florida Petroleum Services operates these off-loading stations. All piping connecting the off-loading stations with the individual bulk fuel storage facilities is underground. TransMontaigne operates and maintains a vapor recovery system adjacent to berth 7 on Pier 2. This system operates in conjunction with the petroleum off-loading station at berth 7. The system is located inside a secondary containment structure.

Maintenance operations at the Public Works facility are conducted under cover or during non-storm events, with all oils and fluids stored indoors or under cover. Currently, the Significant Materials in Northport are bulk steel, construction material staged along Piers 1 and 2, and petroleum products within the off-loading stations. There are numerous Significant Materials staged outside at the Public Works facility. These materials include: paint and painting supplies, scrap metal, empty drums, tires, and refuse.

2.1.2 Midport

The area south of Pier 1 to approximately SE 36th Street is Midport, and is depicted in the attached Figure 3. Midport facilities include the Port Operations/Harbormaster Tower, 7 cruise terminals, CEMEX facility, Continental Cement facility, Port Everglades Cold Storage facility, Port Everglades Administration Building, numerous cargo terminal yards, and the warehouses in the Foreign Trade Zone. Significant Materials currently located in Midport include cement constituents, engine oil, used oil, and hydraulic fluid. Cement materials are located at both the CEMEX and Continental facilities, while the oils and hydraulic fluids are located at various maintenance locations within the cargo terminal yards. Maintenance activities are typically

conducted during non-storm events or inside and all oils and fluids typically are stored indoors or under cover.

2.1.3 Southport

Southport encompasses the approximate area south of SE 36th Street to the PEV southern boundary, the Dania Cut Off Canal, and is depicted in the attached Figure 4. The primary cargo terminals for containerized cargo are located in Southport. The facilities located at Southport include the PEV Crane Office/Maintenance facility, U.S. Customs, and several cargo terminal yards. Significant Materials at Southport include oil, used oil, hydraulic fluid, and tires. These materials are located at the PEV Crane Office/Maintenance facility and the various tenants' maintenance areas. Maintenance activities are typically conducted during non-storm events, inside and all oils and fluids typically are stored indoors or under cover.

2.2 PEV Tenants

2.2.1 Primary PEV Tenants

Tenants at PEV are required to obtain and maintain their own stormwater permitting and SWPPP, as required by their particular operation. Only tenants that have a known potential to materially impact stormwater will be discussed in the SWPPP. Each tenant is responsible for stormwater permitting and management within their respective lease and grids. Grids are areas that tenants utilize for a determined amount of time (typically short-term), but are not as rigidly set as tenant leases. The grids that tenants occupy can vary greatly from day to day. A copy of the PEV Tenant Grids and Leases site diagram is attached as Figure 1T.

The current primary tenants with land leases or grids in Northport are Broward County Convention Center, Greater Fort Lauderdale Convention and Visitors Bureau, Portside Yachting absorbed by the Convention Center, Pittsville Services, Inc. - Florida, Balearia Caribbean, LTD, Corp., the U.S. Customs & Border Protection, South Florida Petroleum Services, LLC, Accordia Shipping LLC, Shipwright LLC, Siemens Real Estate, a Division of Siemens Corp, Host Terminals, Inc., Tropic Oil Company, Eller-ITO Stevedoring Company, Ceres Marine Terminals, Inc., Dole Fresh Fruit Company, Moran Shipping Agencies, Inc., Port Everglades Environmental Corp. (PEECO),

Seafarers' House, Inc., GAC Shipping (USA), Inc., American Guard Services, Inc., Norton Lilly International, Inc., Hamburg Süd North America, U.S. Dept of Homeland Security, United States Coast Guard, Logistec Everglades LLC, U.S. Dept of Commerce, National Oceanic & Atmospheric Administration (NOAA), Christian Bay Shipping Co., and Commercial Diver Services Corporation 1990.

Primary tenants with land leases or grids in Midport include Seabulk Towing, Inc., Highwoods/Florida Holdings, L.P., Resolve Fire & Hazard Response, Inc., Cemex Construction Materials Florida LLC, Continental Florida Materials Inc., Tugz Company LLC d/b/a McAllister Towing of Port Everglades, Penn Tank Lines, Inc., H.T. Shipping, Inc., Hybur LTD, King Ocean Services Limited, Port Everglades Cold Storage, Inc. c/o CBBC Real Estate Holdings, Inc. Ultralight Beam, LLC, Sol Shipping Services, Inc., U.S. Customs & Border Protection, Southeastern International Services, Inc., Carvallo International Trading Services Corp., International Warehouse Services, Inc., Horizon Terminal Services, LLC, Chiquita Fresh North America, LLC, Florida Fish and Wildlife Conservation Commission, Allied Universal Security Services, American Vulkan Corporation, Bukkehave, Inc., Intercruises Shoreside & Port Services, Inc., Port Everglades Association, Inc., U.S. Dept of Commerce, U.S. Commercial Service (USTR), Portus-PEV LLC, and Terminal Investment Corporation (TICO).

Primary tenants with land leases or grids in Southport include Mediterranean Shipping Company, S.A., Florida East Coast Railway, Inc., King Ocean Services Limited Incorporated, A.G. Royce Metal Marketing, LLC DBA Concrete Refinforcing Products, UTEST Material Testing Equipment, LLC, Universal Marine Medical Supply International, LLC, SESCO Cement Florida LLC, International Warehouse Services, Inc., Beyond Logistics of South Florida, Carvallo International Trading Services Corp., U.S. Customs & Border Protection, Florida International Terminal, LLC, and Crowley Liner Services, Inc.

2.2.2 PEV Tenants Known to be Currently Managing Their Own Stormwater Permitting

PEV tenants Florida Transportation Services, TransMontaigne, Citgo, Florida Rock and Tank Lines, Motiva Enterprises, Chevron, Hess Corporation, Thompson & Associates, Seafreight Line,

Crowley Liner Services, and St. John's Shipping Company are known to be currently managing their own stormwater-related permitting and SWPPPs, which, along with their respective tenant leases and PEV tariffs, govern activities that may impact stormwater for these Tenants and their leaseholds.

2.3 Description of General Facility Stormwater Flows

Stormwater flows to numerous inlets located throughout the Facility. Stormwater is then discharged off-site to the ICW or Dania Cut Off Canal via designated outfalls. Stormwater outfalls are shown in Figures 1 through 4. Figure 1 includes all stormwater outfall locations for Port Everglades. The stormwater flows for Northport, Midport, and Southport are discussed separately below.

2.3.1 Northport Stormwater Flow

Stormwater runoff in Northport is generally directed to the east through a system of stormwater inlets and culverts that discharge into the ICW at Outfalls 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 82, and 83. These outfall locations are depicted in Figure 2. During emergency events, stormwater discharges from offsite bulk fuel storage facilities are received in PEV's Northport stormwater system. During significant rainfall events, certain bulk fuel storage tenants' emergency stormwater discharges are accepted with permission from PEV, and are the result of accumulated water within Fuel Farm secondary containments areas. Section 6.3 below contains more details concerning the emergency discharge of stormwater from offsite bulk fuel storage facilities.

2.3.2 Midport Stormwater Flow

Stormwater in Midport discharges at Outfalls 15, 16, 17, 18, 19, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 81, 84, and 85. With the exception of Outfalls 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, and 48, all Midport outfalls discharge into the ICW. Outfalls 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, and 47 are located along the Florida Power and Light (FPL) Canal, which flows into the ICW along the southern portion of Midport. Outfall 48 is along the western property boundary for PEV, and receives stormwater flow

from the east. Outfall 48 is located in a drainage ditch that flows south to the Dania Cut Off Canal. Midport stormwater outfalls and surface water drainage are illustrated in Figure 3.

2.3.3 Southport Stormwater Flow

Stormwater in Southport is discharged via Outfalls 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, and 80. Outfalls 72, 73, 74, 75, 76, 77, and 78 are located along the southern property boundary of PEV and discharge into the Dania Cut Off Canal. The stormwater flowing to those outfalls flows in a predominately southerly direction before being discharged. Outfalls 79 and 80 are located on the west side of Southport and discharge into a drainage ditch that is connected to the Dania Cut Off Canal. Outfalls 49, 50, 51, 52, 53, 54, 55, 56, and 57 discharge into a wetland area that ultimately flows into the ICS; however, Outfalls 51, 52, 53, 54, 55, 56, and 57 are in the process of being removed as part of an ongoing slip expansion construction project. Stormwater outfalls and surface water drainage for Southport are illustrated in Figure 4.

3.0 DESCRIPTION OF POTENTIAL POLLUTION SOURCES

This section describes Significant Materials that are stored and/or handled at PEV that may be considered potential pollution sources, if exposed to precipitation.

3.1 Significant Materials Stored

At times, PEV or PEV tenants store or handle the following Significant Materials:

Material	Direction of Stormwater Flow	Purpose/Location
Engine Oil	East to ICW	Used in forklift and vehicle maintenance and operation; PEV Maintenance Facilities; Maintenance facilities for Tenants
Hydraulic Oil	East to ICW	Used in fork lift and equipment maintenance and operation; PEV Maintenance Facilities; Maintenance facilities for Tenants
Refined Petroleum	East to ICW	Off-loaded at specified stations along berths 7, 9, and 13 in Northport
Cement Materials	North to ICW	Loading and unloading at CEMEX and Continental facilities
Steel, aluminum, various metals	East to ICW	Used in port operations, cargo container, forklift, equipment maintenance; PEV Maintenance Facilities; Maintenance facilities for Tenants
Paint and Painting Related Waste	East to ICW	By-product of PEV maintenance and operations; located at PEV Public Works facility in Northport
Used Tires	East to ICW	Used in forklift and transport trailer maintenance; Maintenance facilities for PEV and Tenants
Facility Waste	East to ICW	By-product of PEV maintenance and operations; solid waste dumpsters located throughout PEV

3.2 Methods of On-Site Storage

Significant Materials utilized by PEV or its Tenants during daily port operations and maintenance, other than cement materials which are stored in silos, should be stored in 55-gallon drums with lids, and 5-gallon commercial size containers stored under cover or indoors. Drums stored by PEV are primarily located at the PEV maintenance facilities and stored indoors or under cover. Tenant drums and containers are also stored at Tenant facilities. Refined petroleum is stored within the charged conveyance piping originating from the off-loading stations located at berths 7, 9, and 13. These off-loading stations are within secondary containment and are covered. The charged petroleum lines originating from those off-loading stations continue underground either to the bulk fuel storage facilities offsite or underground to numerous fueling stations at berths throughout PEV.

3.3 Potentially Exposed Materials

Significant Materials that could be potentially exposed to precipitation at the Facility include the following: engine oil, hydraulic oil, petroleum products, cement material, various metals, used tires, and waste.

The potential risk for contribution of contaminants to stormwater runoff from the above materials is determined by considering the following factors:

- The frequency and location of fuel transferred to forklifts and vehicles from ASTs located at the Facility;
- The use of various materials and oils outside during daily operation and maintenance activities;
- The likelihood of contact with stormwater; and

- The physical characteristics of the surface over which PEV and Tenant activities take place (i.e., paved, gravel, soil).

Based on the above factors, the potential risk for contribution of contaminants to stormwater runoff is relatively low. The majority of forklift and vehicle maintenance activities are conducted inside garages and most Significant Materials are stored inside or under cover. Areas where Facility activities occur outside are paved or required to be cleaned as needed. Fuel ASTs are in secondary containment and drums are located near spill kits. All drums should be sealed with lids and stored inside or under covered areas to prevent contact with stormwater runoff. The unloading of refined petroleum products at berths 7, 9, and 13 is conducted at permanent off-loading stations equipped with a covered secondary containment. Additionally, BMPs are in place to reduce the potential for petroleum from off-site sources contacting stormwater.

3.4 Receiving Body of Water

Numerous stormwater inlets and 85 known stormwater outfalls are present within PEV. The numbered stormwater outfalls are located along the eastern and southern boundaries of PEV and discharge to the ICW, the Dania Cut Off Canal, the FPL Cooling Canal, or into a drainage ditch/wetlands that ultimately flow into the Dania Cut Off Canal or ICW (see Section 2.3 for a description of outfalls discharge into each waterbody).

4.0 CERTIFICATION OF NON-STORMWATER DISCHARGES

A non-stormwater discharge is defined by the USEPA as any water used directly in a manufacturing process (process water), vehicle wash water, or sanitary wastes. The following non-stormwater discharges are authorized under a MSGP:

- Discharges from fire fighting activities;
- Fire hydrant flushing;
- Potable water sources including waterline flushing;
- Irrigation drainage;
- Lawn watering;
- Uncontaminated groundwater;
- Foundation of footing drains where flows are not contaminated with process materials;
- Discharges from springs;
- Routine exterior building wash downs which do not use detergents or other compounds;
- Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred and where detergents are not used; and
- Air conditioning condensate.

MSGP authorized non-stormwater discharges identified at the Facility include fire hydrant flushing, potable water sources, which includes water line flushing and wash water used in cleaning buildings.

In accordance with the requirements outlined in the MSGP, a certification of the Facility outfalls for the presence of non-stormwater discharges was conducted during 2018. The majority of outfalls are located below mean sea level, allowing the influx of seawater during tidal cycles. Additionally, the majority of the stormwater conveyance piping is located beneath the water table, allowing the infiltration of groundwater in the stormwater system. Outfalls are visually

examined for signs of non-stormwater connections into the stormwater collection system. During inspections conducted in October 2018, no unauthorized non-stormwater connections were identified at the port's outfalls. Outfalls will be visually examined every five years to ensure continued compliance with the MSGP and to maintain stormwater collection system integrity. Certified Non-Stormwater Discharge Assessment and Certification Forms are attached as Appendix B.

5.0 STORMWATER DATA

PEV is operating under an approved MSGP under Sector Q SIC Code 4491. A copy of the NOI and MSGP approval letter is provided in Appendix A.

The permit monitoring requirements for Sector Q include the following parameters: total recoverable aluminum, iron, lead, and zinc. Each outfall at PEV is currently designated as Sector Q. Primary outfalls for monitoring are Outfalls 12, 37, and 65. These outfalls are considered to be most likely impacted by maintenance operations at PEV. Monitoring for each constituent is required in Year 2 of the permit coverage, and in Year 4 of the permit coverage if the average concentration of a parameter exceeded the allowable concentration in Year 2. Additionally, Year 4 monitoring is required if facility operations or the SWPPP has been altered. The MSGP covers all drainage basins associated with the Facility.

Sampling for Outfall 12 is currently conducted up gradient of the outfall at the PEV Public Works building, located at the northwest corner of SE 22nd Street and Eisenhower Blvd. The sampling location is labeled SP# 1 in Figures 1 and 2. The sampling location for Outfall 37 is currently up gradient of the outfall which is located on the south end of Berth 29 in Midport. It is labeled SP #2 in Figures 1 and 3. The sampling location for Outfall 65 is currently up gradient of the outfall at the PEV Maintenance Facility located in Southport. This sampling location is labeled SP# 3 in Figures 1 and 4.

5.1 Total Maximum Daily Load (TMDL) Determination Process

As part of the state of Florida's initiative to determine and allocate TMDLs in the area of the Facility, the State or other parties may develop stormwater data that is relevant to the Facility. A TMDL represents the maximum amount of a given pollutant that a waterbody can assimilate and still meet water quality standards, including its applicable water quality criteria and its designated uses. TMDLs are developed for waterbodies that are verified as not meeting their water quality standards. TMDL allocation is implemented through basin management action plans (BMAPs).

The Dania Cut-off Canal has been verified as impaired for fecal coliform, and therefore was included on the Verified Lists of impaired waters for the Southeast Coast–Biscayne Bay Basin that were adopted by FDEP Secretarial Order in May 2006 or November 2010. A TMDL study was conducted (FDEP, 2012) to determine TMDLs for its basin. As of the effective date of this SWPPP, Facility management is unaware of any BMAP activities in the area adjacent to the Port property. Additionally, fecal coliforms are not a contaminant associated with the operation of the Facility.

Facility management will monitor BMAP activity in the local area for regulatory updates.

6.0 STORMWATER MANAGEMENT CONTROLS

The following sections describe the non-structural and structural BMPs designed for the Facility to minimize or prevent the discharge of pollutants to the stormwater runoff. Written BMPs for the Facility are issued from time to time and are attached and made a part of this SWPPP at Appendices C and D.

6.1 Non-Structural Controls

6.1.1 Pollution Prevention Team

To ensure implementation and maintenance of the SWPPP, individuals with the job titles identified below are responsible for the oversight of the PEV SWPPP program. If issues or questions arise regarding implementation of the SWPPP, the Team Members should contact the Team Leader. All personnel and tenants have access to the SWPPP, as all Port Everglades departments and the Pollution Prevention Team receive copies via email.

Pollution Prevention Team		
Team Members:	Title/Department:	Contact Information:
Erik Neugaard	Team Leader Environmental Program Manager 1850 Eller Drive, Suite 504 Ft. Lauderdale FL 33316	Phone (Office): 954-468-0164 Emergency (Cell): 954-881-6511 Email: eneugaard@broward.org
Jeff White	Operations 1850 Eller Drive Ft. Lauderdale FL 33316	Phone (Office): 954-468-0219 Emergency (Cell): 954-444-9632 Email: JEWhite@broward.org
John Walker	Public Works Department 2101 Eisenhower Blvd. Fort Lauderdale FL 33316	Phone (Office): 954-468-3546 Emergency (Cell): 954-706-4003 Email: JOWalker@broward.org
Loren Fourness	Property Management 1850 Eller Drive, Suite 603	Phone (Office): 954-468-3518 Emergency (Cell): 954-609-8170

Pollution Prevention Team		
Team Members:	Title/Department:	Contact Information:
	Ft. Lauderdale FL 33316	Email: lfourness@broward.org
Pedro Romero	Gantry Crane Area 1850 Eller Drive Ft. Lauderdale FL 33316	Phone (Office): 954-468-0201 Emergency (Cell): (954) 553-9205 Email: promero@broward.org
Mike Saltzman	Project Manager 1850 Eller Drive Ft. Lauderdale FL 33316	Phone (Office): 954-468-0155 Emergency (Cell): 954-325-7925 Email: LSaltzman@broward.org

Team Leader responsibilities include ensuring implementation of the Facility SWPPP, record keeping, PEV personnel training, and quarterly visual inspections. Team Member responsibilities include, but are not limited to, familiarizing themselves with the most current SWPPP and any amendments thereto, maintaining full compliance with the environmental provisions found in their respective PEV tariffs, lease documents, the training of tenant personnel, and implementation of and continuing compliance with the SWPPP. Additionally, Team Members must ensure all Significant Materials are safely used and stored in accordance with this SWPPP, and all Tenant activities are conducted in accordance with applicable federal, state, and local laws and regulations. Team Members must be aware of any change in their daily operations that would necessitate notification of the Team Leader, a modification of Tenant operations or practices, or modification of the SWPPP. Team Members must maintain a clear line of communication with the Team Leader to ensure SWPPP implementation and continuing compliance.

6.1.2 Inspections and Preventive Maintenance

Preventive maintenance in relation to the SWPPP involves the inspection and maintenance of stormwater conveyance system devices and Facility equipment. Maintenance of stormwater management devices performed as part of this program and other routine maintenance programs includes the following:

- Monthly inspection by PEV of Significant Material and equipment areas, to include: pressure washing area, blasting and painting areas, material storage areas, engine maintenance and repair areas, material handling areas, drydock area, and general yard area;
- Quarterly inspections by PEV or a designated representative of the PEV drainage systems;
- Quarterly inspection by PEV of drum storage areas for damage and/or corrosion;
- Cleaning and sweeping of berths and paved areas by PEV and each Tenant on an as-needed basis.

Any repairs or corrections required as a result of the inspections and testing are promptly implemented. Completed inspection forms will be kept with this SWPPP, scanned and filed electronically.

6.1.3 Good Housekeeping

Good housekeeping should be practiced at PEV as part of the standard operating procedures. The maintenance of a clean and orderly facility maximizes operational efficiency and minimizes employee safety hazards, in addition to reducing pollutants that may inadvertently discharge to the stormwater conveyance system. Housekeeping practices such as improving process operations, proper materials storage practices, maintaining material inventory, scheduling routine cleanups, maintaining well-organized work areas, and proper employee training are promoted. Good housekeeping practices performed at PEV are in accordance with general PEV policies and standard operating procedures. PEV good housekeeping practices include:

- Performing forklift and vehicle maintenance inside when possible;
- Storing all Significant Materials and containers inside or under cover, and maintaining and closing lids on containers;
- Routinely inspecting material usage work areas;

- Prohibiting the practice of hosing down forklifts, equipment, berths, and drums except at designated locations which provide appropriate stormwater pre-treatment equipment like oil/water separators;
- Using drip pans while conducting routine maintenance of cranes, forklifts and vehicles;
- Cleaning/sweeping berths and paved areas on an as-needed basis; and
- Attending annual meetings for BMP training.

6.1.4 Spill Prevention and Response

Spill prevention and response procedures are discussed during Annual Training/BMP Training Meetings. Spills are to be promptly isolated and cleaned up in accordance with the procedures and state and federal laws and regulations. The Team Leader or his designated representative conducts visual inspections of 55-gallon drums and individual Tenant personnel are required to identify and notify the Team Leader of areas for potential leaks or spills. Methods of secondary containment include spill pallets, spill kits and absorbent materials. All drums should be sealed with lids and stored inside or under covered areas to prevent contact with stormwater runoff.

6.1.5 Employee Training

The stormwater pollution prevention Team Leader is responsible for ensuring all required PEV personnel are aware of and implement the SWPPP. Each PEV Tenant is responsible for providing and maintaining their own employee training regarding the SWPPP, NPDES requirements, Clean Water Act requirements, and other general stormwater guidance and regulations. At a minimum, training must be provided for personnel who routinely work in or near areas that are identified as having the potential for contributing pollutants to stormwater runoff. Training includes instructions for each of the following items:

- Overview of the stormwater permit requirements and conditions;
- Spill prevention and response training;

- Significant material management practices;
- Stormwater management practices;
- Good housekeeping practices;
- Inspection procedures and schedules; and
- Review of documentation and reporting requirements.

All required personnel should receive training within six (6) months of employment or change of duties, and annually thereafter. The most recent PEV training event occurred on September 28, 2018.

6.1.6 Comprehensive Site Compliance Evaluation

A formal inspection is conducted and documented annually as part of the SWPPP program. The inspection attempts to ensure that: 1) the descriptions of potential pollution sources remain accurate, 2) the Facility Diagrams reflects current conditions, and 3) the SWPPP program is being properly implemented. Responsible personnel will be instructed during training to observe evidence of, or the potential for, pollutants to enter stormwater runoff from equipment or material handling and storage areas. If necessary, the SWPPP will be revised and any necessary changes will be implemented in a timely manner after the inspection.

6.1.7 Recordkeeping

Records documenting significant observations made during monthly, quarterly and annual inspections and resulting corrective actions will be retained by PEV as part of the SWPPP for a period of at least three years.

6.2 Structural Controls

Structural controls are implemented at the Facility to improve the prevention and control of polluted stormwater. Structural controls at the Facility include the following items:

- Where required, all construction projects include permitting from the Florida Department of Environmental Protection (“*FDEP*”) and Broward County;
- All construction projects take into consideration potential stormwater runoff;
- Detention/retention ponds, exfiltration trenches, swales, and swale checks are used as required by sound engineering practices;
- Detention/retention ponds and swales are incorporated in project designs to minimize pollutant discharges, and are maintained so stormwater runoff is not impeded;
- Eroded vegetative structures are repaired as quickly as possible; and
- All drainage systems are inspected following major storm events.

6.3 Emergency Stormwater Discharges from the Bulk Fuel Storage Facilities

The offsite Bulk Fuel Storage Facilities are located along the west side of PEV north of Eller Drive adjacent to both Northport and Midport. The bulk fuel storage facilities are located on private property. During significantly high rainfall events, approved facilities may discharge accumulated stormwater within their secondary containment structure to the PEV stormwater system. Discharges of this nature are intended to only be conducted during “emergency” type events. The discharge of accumulated stormwater is not routine. The bulk fuel storage facilities discharging stormwater must adopt and implement specific PEV BMPs before discharging accumulated stormwater from within the secondary containment structures into the PEV stormwater system. Such BMPs are included in Appendix D of this SWPPP. Locations of the bulk fuel storage facilities are depicted in Figure 5.

FIGURES

PORT EVERGLADES DRAINAGE AREA MAP EXHIBIT NORTHPORT - MIDPORT - SOUTHPORT

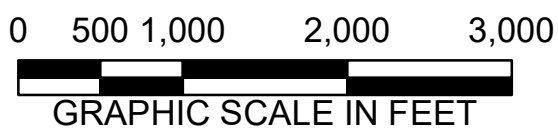
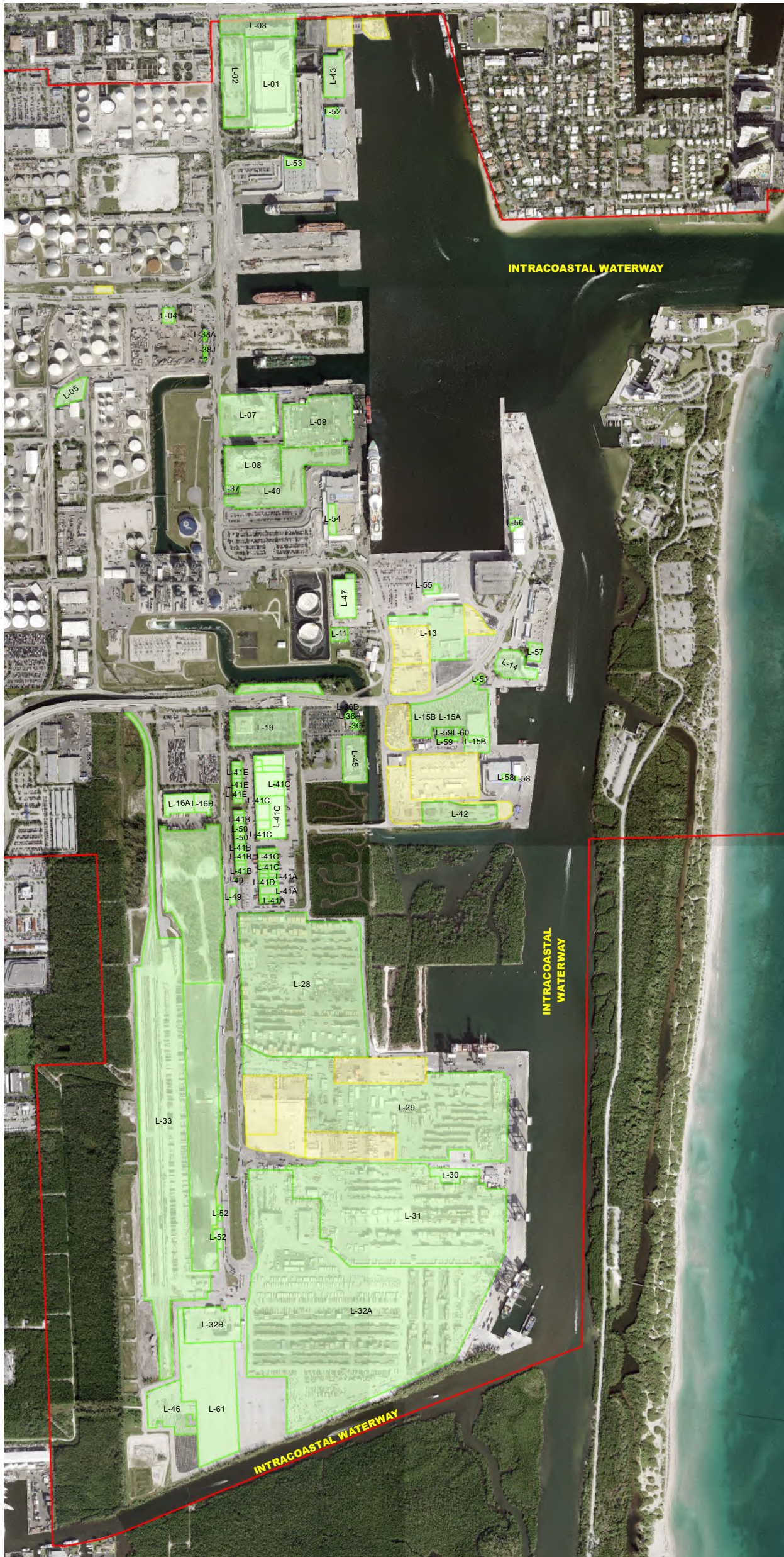


FIGURE 1

Legend

- SP Sample Point Location
- Drainage Flow Patterns
- ⊗ Outfall Discharge Location
- Drainage Pipe
- Drainage Boundary Area
- Port Everglades Boundary

PORT EVERGLADES SITE DIAGRAM OF TENANT GRIDS AND LEASES



ID	Existing Land Leases:
L-01	Broward County Convention Center
L-02	Greater Fort Lauderdale Convention and Visitors Bureau
L-03	Portside Yachting absorbed by the Convention Center
L-04, L-38N	Pittsville Services, Inc. - Florida
L-05	Penn Tank Lines, Inc.
L-07	Continental Florida Materials Inc.
L-08	Cemex Construction Materials Florida LLC
L-09	H.T. Shipping, Inc. and Hybur LTD
L-11	Resolve Fire & Hazard Response, Inc.
L-13	SoI Shipping Services, Inc.
L-14	Seabulk Towing, Inc.
L-15A, L-42	Horizon Terminal Services, LLC
L-15B	Ultralight Beam, LLC
L-16A	Chiquita Fresh North America, LLC
L-16B, 30, 48, 49, 50, 52, 53, 54, 55, 56, 57, 58	The Government of the United States of America (U.S. Customs & Border Protection)
L-19	Highwoods/Florida Holdings, L.P.
L-28, L-61	Florida International Terminal, LLC
L-29, 37, 40	King Ocean Services Limited (Cayman Islands) Incorporated
L-31	Mediterranean Shipping Company, S.A.
L-32A, L-32B	Crowley Liner Services, Inc.
L-33	Florida East Coast Railway, Inc.
L-36A	Allied Universal Security Services
L-36B	American Vulkan Corporation
L-36C	Bukkehave, Inc.
L-36D	Intercruises Shoreside & Port Services, Inc.
L-36F	Port Everglades Association, Inc.
L-36F	U.S. Dept of Commerce, U.S. Commercial Service (USTR)
L-36G	Moss/Kiewit (NOT A LEASE)
L-36H	Broward Sheriff's Office - Port Everglades District (NOT A LEASE)
L-38A	Accordia Shipping LLC
L-38B	American Guard Services, Inc.
L-38C	Ceres Marine Terminals, Inc.
L-38D	Christian Bay Shipping Co.
L-38E	Commercial Diver Services Corporation 1990
L-38F	Dole Fresh Fruit Company
L-38G	Eller-ITO Stevedoring Company
L-38H	GAC Shipping (USA), Inc.
L-38I	Hamburg Süd North America
L-38J	Host Terminals, Inc.
L-38K	Logistec Everglades LLC
L-38L	Moran Shipping Agencies, Inc.
L-38M	Norton Lilly International, Inc.
L-38O	Port Everglades Environmental Corp. (PEECO)
L-38P	Seafarers' House, Inc.
L-38Q	Shipwright LLC
L-38R	Siemens Real Estate, a Division of Siemens Corp
L-38S	South Florida Petroleum Services, LLC
L-38T	Sunshine Shipping, Inc.
L-38U	Tropic Oil Company
L-38V	U.S. Dept of Commerce, National Oceanic & Atmospheric Administration (NOAA)
L-38W	U.S. Dept of Homeland Security, United States Coast Guard
L-41A	Beyond Logistics of South Florida
L-41B	Carvallo International Trading Services Corp.
L-41C	International Warehouse Services, Inc. - Bldg A, Bldg F (Bays 2-4) & one-half of Bay 5, 15-17
L-41D	Sesco Cement Florida LLC
L-41E	Southeastern International Services, Inc.
L-41F	Universal Marine Medical Supply International, LLC
L-41G	UTEST Material Testing Equipment, LLC
L-43	Balearia Caribbean, LTD, Corp.
L-44A	The Society for the Prevention of Cruelty to Animals (SPCA)
L-44B	AMIkids of Greater Fort Lauderdales, Inc.
L-44C	Broward County Fire Station
L-45	Florida Fish and Wildlife Conservation Commission
L-46	A.G. Royce Metal Marketing, LLC DBA Concrete Reinforcing Products ("CPR")
L-47	Port Everglades Cold Storage, Inc. c/o CBBC Real Estate Holdings, Inc.
L-51	Tugz Company LLC d/b/a McAllister Towing of Port Everglades
L-59	Portus-PEV LLC
L-60	Terminal Investment Corporation (TICO)

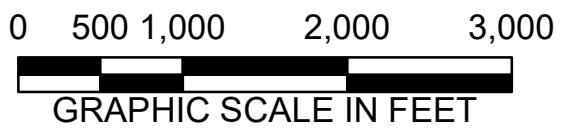


FIGURE 1T

Legend

- Port Everglades Boundary
- Land Leases
- Grid Assignment

PORT EVERGLADES

NORTHPORT & MIDPORT DRAINAGE AREA MAP EXHIBIT SHEET 1








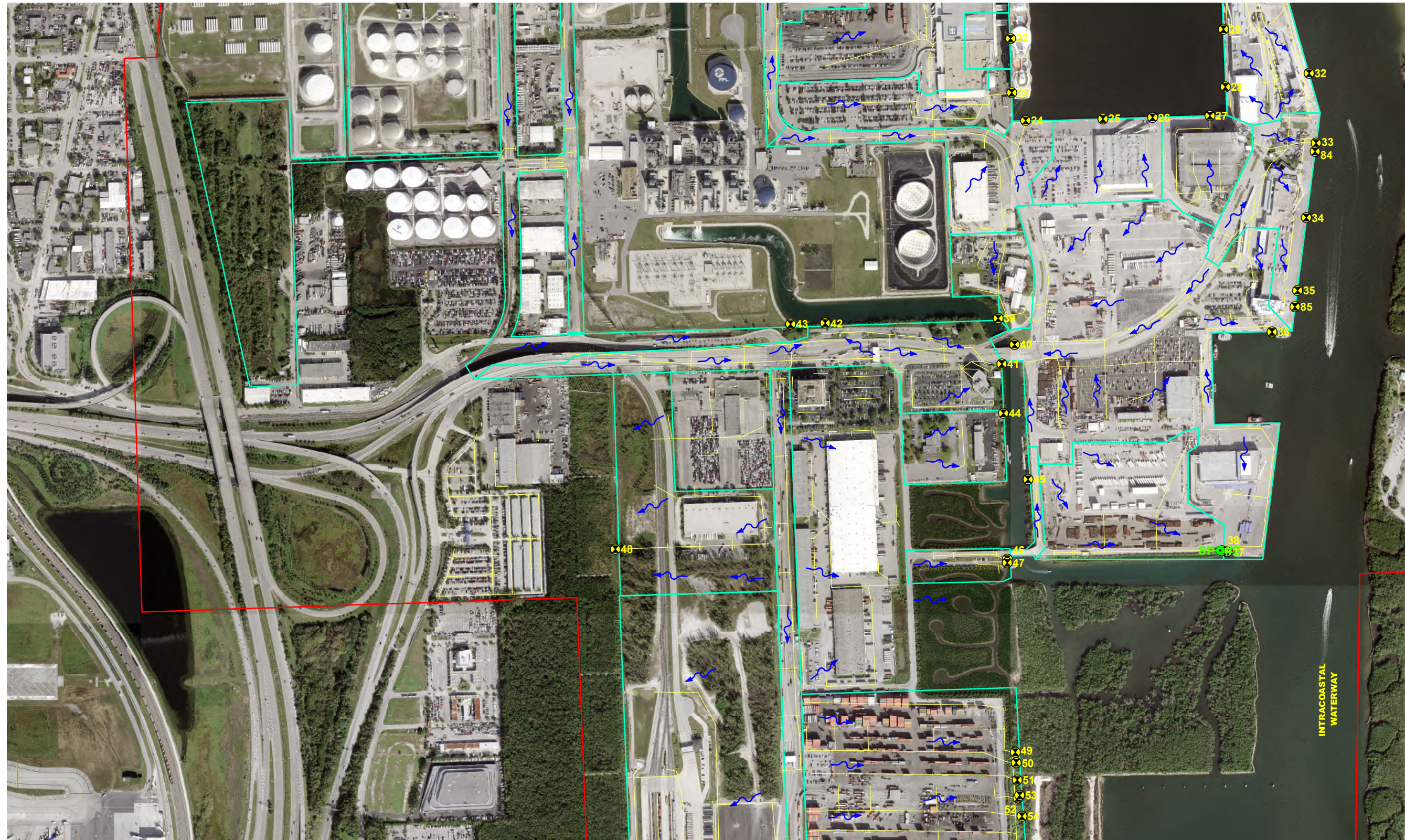
- Legend**
- SP Sample Point Location
 -  Drainage Flow Patterns
 -  Outfall Discharge Location
 -  Drainage Boundary Area
 -  Drainage Pipe
 -  Port Boundary



FIGURE 2

PORT EVERGLADES

MIDPORT & SOUTHPORT DRAINAGE AREA MAP EXHIBIT SHEET 2









- Legend**
-  Sample Point Location
 -  Drainage Flow Patterns
 -  Outfall Discharge Location
 -  Drainage Boundary Area
 -  Drainage Pipe
 -  Port Boundary



FIGURE 3

PORT EVERGLADES

SOUTHPORT DRAINAGE AREA MAP EXHIBIT SHEET 3



Legend






- SP Sample Point Location
-  Drainage Flow Patterns
-  Outfall Discharge Location
-  Drainage Boundary Area
-  Drainage Pipe
-  Port Boundary



FIGURE 4

PORT EVERGLADES BULK FUEL STORAGE FACILITIES

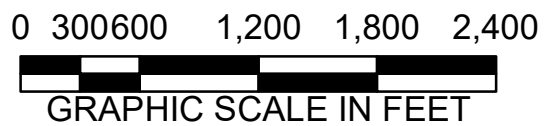


FIGURE 5

Legend

 Tank Farm Location

APPENDIX A

FDEP MULTI-SECTOR GENERIC PERMIT & NOTICE OF INTENT



**NOTICE OF INTENT
TO USE
MULTI-SECTOR GENERIC PERMIT FOR
STORMWATER DISCHARGE
ASSOCIATED WITH INDUSTRIAL ACTIVITY
(RULE 62-621.300(5), F.A.C.)**

This form is to be completed and submitted to the Department before use of the Multi-Sector Generic Permit for Stormwater Discharge Associated with Industrial Activity (MSGP) provided in subsection 62-621.300(5), F.A.C. The type of facility or activity that qualifies for use of this generic permit, the conditions of the permit and additional requirements to request coverage are specified in paragraph 62-621.300(5)(a), F.A.C. Note that additional requirements for requesting coverage include submittal of the applicable generic permit fee pursuant to Rule 62-4.050, F.A.C. Familiarize yourself with the generic permit and the attached instructions before completing this form. **Please print or type information in the appropriate areas below.**

I. IDENTIFICATION NUMBER: Facility ID FLR05B255-003

II. APPLICANT INFORMATION:

A. Operator Name: Port Everglades Department		B. Operator Status: M	
C. Address: 1850 Eller Dr			
D. City: Fort Lauderdale		E. State: FL	F. Zip Code: 33316 4202
G. Responsible Authority: Steven Cernak			
H. Responsible Authority's Phone No.: (954) 468-3516			
I. Responsible Authority's Fax No.:			
J. Responsible Authority's E-mail Address: SCERNAK@broward.org			

III. FACILITY LOCATION INFORMATION:

A. Facility Name: Port Everglades Department			
B. Street Address: 1850 Eller Dr			
C. City: Fort Lauderdale		D. State: FL	E. Zip Code: 33316 4202
F. County: Broward	G. Latitude: 26 ° 4 ' 53.82 "	Longitude: -80 ° 7 ' 13.96 "	
H. Is the facility located on Indian Country Lands? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		I. Water Management District: SFWMD	
J. Facility Contact: Erik Neugaard		K. Phone No.: (954) 468-0164	
L. Fax No.: (954) 468-3436		M. E-mail Address: ENeugaard@broward.org	

IV. FACILITY ACTIVITY INFORMATION:

A. SIC or Designated Activity Code(s)		Primary: 4491	Secondary:
B. Monitoring code (1, 2, 3, or 4): 2		C. Will construction be conducted for stormwater controls? <input type="radio"/> Yes <input checked="" type="radio"/> No	
D. Other Existing Permits	ERP No.: ERP 172079	Wastewater Permit No.:	Other (specify):

V. DISCHARGE INFORMATION


A. MS4 Operator Name: f/A							
B. Discharge Location(s):							
Outfall No.	Latitude			Longitude			Receiving Water Name
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	
1	26	5	43.04	-80	7	28.44	Atlantic Ocean/ICW
2	26	4	43.85	-80	6	58.19	Atlantic Ocean/ICW
3	26	4	9.65	-80	6	57.98	Atlantic Ocean/ICW

VI. CERTIFICATION¹:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Responsible Authority Name and Official Title (Type or Print):
Steven Cemak, Chief Executive/Port Director


 Responsible Authority Signature:

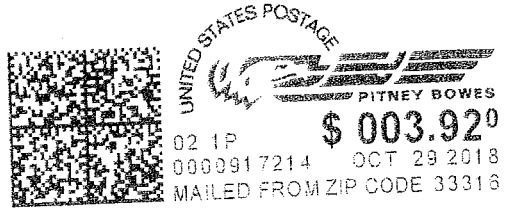

 Date Signed:

¹ Signatory requirements are contained in Rule 62-620.305, F.A.C.

CERTIFIED MAIL



91 7108 2133 3931 8287 3764



NPDES Stormwater Notices Center, MS #2510
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

PS Form 3811, February 2004 Domestic Return Receipt 132506-02-00-1540

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
<ul style="list-style-type: none">Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.Print your name and address on the reverse so that we can return the card to you.Attach this card to the back of the mailpiece, or on the front if space permits.	A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee
1. Article Addressed to: <i>NPDES Stormwater Notices Center, MS #2510 FL Dept. Envir. Protection 2600 Blair Stone Road Tallahassee, FL 32399-2400</i>	B. Received by (Printed Name) C. Date of Delivery
2. Article Number (Transfer from service label) 7001 1140 0000 1460 3510	D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No
	3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.
	4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes

PS Form 3811, February 2004 Domestic Return Receipt 132506-02-00-1540

ENVIRONMENTAL PROTECTION AGENCY

[FRL-5298-3]

Final National Pollutant Discharge Elimination System Storm Water Multi-Sector General Permit for Industrial Activities

AGENCY: Environmental Protection Agency.

SUMMARY: The following provides notice for a final NPDES general permit, accompanying response to comments, and fact sheets for storm water discharges associated with industrial activity in the following Regions:

Region I—the States of Maine, Massachusetts, and New Hampshire; Federal Indian Reservations located in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont; and Federal facilities located in Vermont.

Region II—the Commonwealth of Puerto Rico and Federal facilities located in Puerto Rico.

Region III—the District of Columbia and Federal facilities located in Delaware and the District of Columbia.

Region IV—the State of Florida.

Region V—no areas.

Region VI—the States of Louisiana, New Mexico, Oklahoma, and Texas, and Federal Indian Reservations located in Louisiana, New Mexico (except Navajo Reservation lands, which are handled by Region IX, and Ute Mountain Reservation lands, which are handled by Region VIII and are not being covered by this permit), Oklahoma, and Texas.

Region VII—no areas.

Region VIII—no areas.

Region IX—the State of Arizona; the Territories of Johnston Atoll, and Midway and Wake Islands; all Federal Indian Reservations located in Arizona, California, and Nevada; those portions of the Duck Valley, Fort McDermitt, and Goshute Reservations located outside Nevada; those portions of the Navajo Reservation located outside Arizona; and Federal facilities located in Arizona, Johnston Atoll, and Midway and Wake Islands.

Region X—the State of Idaho; Federal Indian Reservations located in Alaska, Idaho (except Duck Valley Reservation lands, which are handled by Region IX), Oregon (except Fort McDermitt Reservation lands, which are handled by Region IX), and Washington; and Federal facilities located in Idaho, and Washington.

The permit covers storm water discharges associated with industrial activity to waters of the United States, including discharges through large and

medium municipal separate storm sewer systems, and through other municipal separate storm sewer systems. The permit is intended to cover discharges from the following types of industrial activities: lumber and wood products facilities; paper and allied products manufacturing facilities; chemical and allied products manufacturing facilities; asphalt paving and roofing materials manufacturers and lubricants; stone, clay, glass and concrete products facilities; primary metals facilities; metal mines (ore mining and dressing); coal mines; oil and gas extraction facilities; nonmetallic mines and quarries; hazardous waste treatment, storage or disposal facilities; landfills, land application sites and open dumps; automobile salvage yards; scrap and waste material processing and recycling facilities; steam electric power generating facilities; railroad transportation facilities, local and suburban transit and interurban highway passenger transportation facilities, petroleum bulk oil stations and terminals, motor freight transportation facilities and U.S. Postal Service facilities; water transportation facilities; ship or boat building/repair facilities; airports; wastewater treatment plants; food and kindred products facilities; textile mills, apparel and other fabric manufacturing facilities; furniture and fixture manufacturing facilities; printing and publishing facilities; rubber and miscellaneous plastic product and miscellaneous manufacturing facilities; leather tanning and finishing facilities; facilities that manufacture fabricated metal products, jewelry, silverware, and plated ware; facilities that manufacture transportation equipment, industrial, or commercial machinery; and facilities that manufacture electronic equipment and components, photographic and optical goods. Military installations must comply with the permit and monitoring requirements for all sectors that describe industrial activities that such installations perform. Publication of this final general permit, fact sheets, and response to comments complies with the requirements of 40 Code of Federal Regulations (CFR) 124.10.

The language of the permit is provided as an appendix to the preamble of this notice. Most conditions of the general permit are intended to apply to all permittees, unless stated otherwise. Where conditions vary by State, these differences are indicated in the appendix.

ADDRESSES: Notices of Intent (NOIs) to be covered under this permit and Notices of Termination (NOT) to

terminate coverage under this permit must be sent to Storm Water Notice of Intent (4203), 401 M Street, SW., Washington, DC 20460. The complete administrative record is available through the Water Docket MC-4101, Environmental Protection Agency, 401 M Street SW, Washington DC 20460. A reasonable fee may be charged for copying. Each Regional office (see addresses listed in Part VI.G. of this fact sheet) has an index of the complete administrative record.

DATES: This general permit shall be effective on September 29, 1995. Deadlines for submittal of Notices of Intent (NOIs) are provided in Section II.A. of the general permit. Today's general permit also provides additional dates for compliance with the terms of the permits and for submitting monitoring data where required.

FOR FURTHER INFORMATION: For further information on the NPDES storm water general permit, contact the appropriate EPA Regional Office. The name, address and phone number of the EPA Regional Storm Water Coordinators are provided in Part VI.G. of the fact sheet.

Organization of Today's Permit

Today's permit covers storm water discharges from a wide variety of industrial activities. Because the conditions which affect the presence of pollutants in storm water discharges vary among industries, today's permit contains industry-specific sections that describe the storm water pollution prevention plan requirements, the numeric effluent limitation requirements and the monitoring requirements for that industry. These industry-specific sections are contained in Part XI of today's permit and are described in Part VIII of this fact sheet. There are also a number of permit requirements that apply to all industries. These requirements may be found in Parts I through X. They include the general coverage discussion, the Notice of Intent requirements and standard permit conditions. Specifically, Parts I through VII of this fact sheet describe these common requirements. The following is an outline of this fact sheet.

- I. Background
- II. Types of Discharges Covered
 - A. Limitations on Coverage
- III. Pollutants in Storm Water Discharges Associated with Industrial Activities in General
- IV. Summary of Options for Controlling Pollutants
- V. The Federal/Municipal Partnership: The Role of Municipal Operators of Large and Medium Municipal Separate Storm Sewer Systems
- VI. Summary of Common Permit Conditions

- A. Notification Requirements
 - 1. Contents of NOIs
 - 2. Deadlines
 - 3. Municipal Separate Storm Sewer System Operator Notification
 - 4. Notice of Termination
- B. Special Conditions
 - 1. Prohibition of Non-storm Water Discharges
 - 2. Releases of Reportable Quantities of Hazardous Substances and Oil
 - 3. Co-located Industrial Facilities
- C. Common Pollution Prevention Plan Requirements
 - 1. Pollution Prevention Team
 - 2. Description of Potential Pollution Sources
 - 3. Measures and Controls
 - 4. Comprehensive Site Compliance Evaluation
- D. Special Requirements
 - 1. Special Requirements for Storm Water Discharges Associated with Industrial Activity through Large and Medium Municipal Separate Storm Sewer Systems
 - 2. Special Requirements for Storm Water Discharges Associated with Industrial Activity from Facilities Subject to EPCRA Section 313 Requirements
 - 3. Special Requirements for Storm Water Discharges Associated with Industrial Activity from Salt Storage Facilities
 - 4. Consistency With Other Plans
- E. Monitoring and Reporting Requirements
 - 1. Analytical Monitoring Requirements
 - 2. Compliance Monitoring
 - 3. Alternate Certification
 - 4. Reporting and Retention Requirements
 - 5. Sample Type
 - 6. Representative Discharge
 - 7. Sampling Waiver
 - 8. Quarterly Visual Examination of Storm Water Quality
 - 9. SARA Title III, Section 313 Facilities
- F. Numeric Effluent Limitations
 - 1. Industry-specific Limitations
 - 2. Coal Pile Runoff
- G. Regional Offices
 - 1. Notice of Intent Address
 - 2. Address for Other Submittals
 - H. Compliance Deadlines
- VII. Cost Estimates For Common Permit Requirements
 - A. Pollution Prevention Plan Implementation
 - B. Cost Estimates for EPCRA Section 313
 - C. Cost Estimates for Coal Piles
 - D. Cost Estimates for Salt Piles
- VIII. Special Requirements for Discharges Associated with Specific Industrial Activities
 - A. Storm Water Discharges Associated With Industrial Activity From Timber Products Facilities
 - 1. Discharges Covered Under This Sector
 - 2. Industry Profile/Description of Industrial Activities
 - 3. Pollutants Contributing to Storm Water Contamination
 - 4. Options for Controlling Pollutants
 - 5. Special Conditions
 - 6. Storm Water Pollution Prevention Plan Requirements
 - 7. Monitoring and Reporting Requirements
 - B. Storm Water Discharges Associated With Industrial Activity From Paper and Allied Products Manufacturing Facilities
 - 1. Discharges Covered Under This Section
 - 2. Industry Profile
 - 3. Pollutants in Storm Water Discharges Associated With Industrial Activity From Paper and Allied Product Manufacturing Facilities
 - 4. Options for Controlling Pollutants
 - 5. Special Conditions
 - 6. Storm Water Pollution Prevention Plan Requirements
 - 7. Numeric Effluent Limitation
 - 8. Monitoring and Reporting Requirements
 - C. Storm Water Discharges Associated With Industrial Activity From Chemical and Allied Products Manufacturing Facilities
 - 1. Discharges Covered Under This Section
 - 2. Pollutants Found in Storm Water Discharges
 - 3. Options for Controlling Pollutants
 - 4. Special Conditions
 - 5. Storm Water Pollution Prevention Plan Requirements
 - 6. Numeric Effluent Limitations
 - 7. Monitoring and Reporting Requirements
 - D. Storm Water Discharges Associated With Industrial Activity From Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers
 - 1. Discharges Covered Under This Section
 - 2. Pollutants in Storm Water Discharges Associated with Asphalt Facilities and Lubricant Manufacturers
 - 3. Options for Controlling Pollutants
 - 4. Storm Water Pollution Prevention Plan Requirements
 - 5. Numeric Effluent Limitations
 - 6. Monitoring and Reporting Requirements
 - E. Storm Water Discharges Associated With Industrial Activity From Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities
 - 1. Discharges Covered Under This Section
 - 2. Pollutants in Storm Water Discharges Associated with Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing
 - 3. Options for Controlling Pollutants
 - 4. Special Conditions
 - 5. Storm Water Pollution Prevention Plan Requirements
 - 6. Numeric Effluent Limitations
 - 7. Monitoring and Reporting Requirements
 - F. Storm Water Discharges Associated With Industrial Activity From Primary Metals Facilities
 - 1. Discharges Covered Under This Section.
 - 2. Industry Profile
 - 3. Pollutants Found in Storm Water Discharges
 - 4. Options for Controlling Pollutants
 - 5. Special Conditions
 - 6. Storm Water Pollution Prevention Plan Requirements
 - 7. Monitoring and Reporting Requirements
 - G. Storm Water Discharges Associated With Industrial Activity From Metal Mining (Ore Mining and Dressing) Facilities
 - 1. Industrial Profile
 - 2. Pollutants Found in Storm Water Discharges From Metal Mining
 - 3. Options for Controlling Pollutants from Metal Mines
 - 4. Discharges Covered Under This Section
 - 5. Storm Water Pollution Prevention Plan Requirements
 - 6. Monitoring and Reporting Requirements
 - 7. Numeric Effluent Limitations
 - H. Storm Water Discharges Associated With Industrial Activity From Coal Mines and Coal Mining-Related Facilities
 - 1. Discharges Covered Under This Section
 - 2. Pollutants Found in Storm Water Discharges
 - 3. Options for Controlling Pollutants
 - 4. Storm Water Pollution Prevention Plan Requirements
 - 5. Numeric Effluent Limitation
 - 6. Monitoring and Reporting Requirements
 - I. Storm Water Discharges Associated With Industrial Activity From Oil and Gas Extraction Facilities
 - 1. Industry Profile
 - 2. Pollutants in Storm Water Discharges Associated with Oil and Gas Facilities
 - 3. Options for Controlling Pollutants
 - 4. Special Conditions
 - 5. Storm Water Pollution Prevention Plan Requirements
 - 6. Numeric Effluent Limitation
 - 7. Monitoring and Reporting Requirements
 - J. Storm Water Discharges Associated With Industrial Activity From Mineral Mining and Processing Facilities
 - 1. Industry Profile
 - 2. Pollutants in Storm Water Discharges Associated with Mineral Mining and Processing Facilities
 - 3. Options for Controlling Pollutants
 - 4. Storm Water Pollution Prevention Plan Requirements
 - 5. Numeric Effluent Limitation
 - 6. Monitoring and Reporting Requirements
 - 7. Definitions
 - K. Storm Water Discharges Associated With Industrial Activity from Hazardous Waste Treatment, Storage, or Disposal Facilities
 - 1. Industry Profile
 - 2. Pollutants in Storm Water Discharges Associated With Hazardous Waste Treatment, Storage, or Disposal Facilities
 - 3. Pollutant Control Measures Required Through Other EPA Programs
 - 4. Options for Controlling Pollutants
 - 5. Storm Water Pollution Prevention Plan Requirements
 - 6. Numeric Effluent Limitations
 - 7. Monitoring and Reporting Requirements
 - 8. Region-specific Conditions
 - L. Storm Water Discharges Associated With Industrial Activity From Landfills and Land Application Sites
 - 1. Industry Profile
 - 2. Potential Pollutant Sources and Options for Controlling Pollutants at Landfill and Land Application Sites
 - 3. Pollutant Control Measures Required by Other EPA Programs
 - 4. Storm Water Pollution Prevention Plans Requirements
 - 5. Monitoring and Reporting Requirements
 - M. Storm Water Discharges Associated With Industrial Activity From Automobile Salvage Yards
 - 1. Industry Profile

2. Pollutants in Storm Water Discharges Associated with Automobile Salvage Yards
3. Options for Controlling Pollutants
4. Pollutant Control Measures Required Through Other EPA Programs
5. Storm Water Pollution Prevention Plan Requirements
6. Monitoring and Reporting Requirements
- N. Storm Water Discharges Associated With Industrial Activity From Scrap Recycling and Waste Recycling Facilities
 1. Industry Profile
 2. Pollutants Found in Storm Water Discharges
 3. Options for Controlling Pollutants
 4. Discharges Covered under this Section
 5. Special Conditions
 6. Storm Water Pollution Prevention Plan Requirements
 7. Monitoring and Reporting Requirements
- O. Storm Water Discharges Associated With Industrial Activity From Steam Electric Power Generating Facilities, Including Coal Handling Areas
 1. Industry Profile
 2. Pollutants in Storm Water Discharges Associated With Steam Electric Power Generating Facilities
 3. Pollutant Control Measures Required Under Other EPA Programs
 4. Storm Water Pollution Prevention Plan Requirements
 5. Numeric Effluent Limitations
 6. Monitoring and Reporting Requirements
- P. Storm Water Discharges Associated With Industrial Activity From Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Transportation Facilities, and United States Postal Service Transportation Facilities
 1. Discharges Covered Under This Section
 2. Pollutants Found in Storm Water Discharges from Vehicle and Equipment Maintenance and Cleaning Operations
 3. Options for Controlling Pollutants
 4. Pollutant Control Measures Required Through Other EPA Programs
 5. Special Conditions
 6. Storm Water Pollution Prevention Plan Requirements
 7. Monitoring and Reporting Requirements
- Q. Storm Water Discharges Associated With Industrial Activity From Water Transportation Facilities That Have Vehicle Maintenance Shops and/or Equipment Cleaning Operations
 1. Discharges Covered Under This Section
 2. Pollutants Found in Storm Water Discharges
 3. Options for Controlling Pollutants
 4. Pollutant Control Measures Required Through Other EPA Programs
 5. Special Conditions
 6. Storm Water Pollution Prevention Plan Requirements
 7. Monitoring and Reporting Requirements
- R. Storm Water Discharges Associated With Industrial Activity From Ship and Boat Building or Repairing Yards
 1. Discharges Covered Under This Section
 2. Pollutants Found in Storm Water Discharges
 3. Options for Controlling Pollutants
4. Pollutant Control Measures Required Through Other EPA Programs
5. Special Conditions
6. Storm Water Pollution Prevention Plan Requirements
7. Numeric Effluent Limitation
8. Monitoring and Reporting Requirements
- S. Storm Water Discharges Associated With Industrial Activity From Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities.
 1. Discharges Covered Under This Section.
 2. Pollutants Found in Storm Water Discharges.
 3. Special Conditions.
 4. Storm Water Pollution Prevention Plan Requirements.
 5. Numeric Effluent Limitation.
 6. Monitoring and Reporting Requirements.
- T. Storm Water Discharges Associated With Industrial Activity From Treatment Works.
 1. Discharges Covered Under this Section.
 2. Industry Profile.
 3. Pollutants Found in Storm Water Discharges From Treatment Works.
 4. Options for Controlling Pollutants.
 5. Special Conditions.
 6. Storm Water Pollution Prevention Plan Requirements.
 7. Monitoring and Reporting Requirements.
- U. Storm Water Discharges Associated With Industrial Activity From Food and Kindred Products Facilities.
 1. Discharges Covered Under this Section.
 2. Industry Profile.
 3. Pollutants in Storm Water Discharges Associated with Food and Kindred Products Processing Facilities.
 4. Options for Controlling Pollutants.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Monitoring and Reporting Requirements.
- V. Storm Water Discharges Associated With Industrial Activity From Textile Mills, Apparel, and Other Fabric Product Manufacturing Facilities.
 1. Discharges Covered Under this Section.
 2. Pollutants in Storm Water Discharges Associated with the Manufacture of Textile Products.
 3. Options for Controlling Pollutants.
 4. Special Conditions.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Monitoring and Reporting Requirements.
- W. Storm Water Discharges Associated With Industrial Activity From Wood and Metal Furniture and Fixture Manufacturing Facilities.
 1. Discharges Covered Under This Section.
 2. Industry Profile.
 3. Pollutants in Storm Water Discharges Associated with Furniture and Fixtures Manufacturing Facilities.
 4. Options for Controlling Storm Water Pollutants.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Monitoring and Reporting Requirements.
- X. Storm Water Discharges Associated With Industrial Activity From Printing and Publishing Facilities.
 1. Industry Profile.
2. Pollutants Found in Storm Water Discharges from Printing and Publishing Facilities.
3. Options for Controlling Pollutants.
4. Storm Water Pollution Prevention Plan Requirements.
5. Monitoring and Reporting Requirements.
- Y. Storm Water Discharges Associated With Industrial Activity From Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.
 1. Discharges Covered Under This Section.
 2. Pollutants Found in Storm Water Discharges.
 3. Options for Controlling Pollutants.
 4. Special Conditions.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Numeric Effluent Limitations.
 7. Monitoring and Reporting Requirements.
- Z. Storm Water Discharges Associated With Industrial Activity From Leather Tanning and Finishing Facilities.
 1. Discharges Covered Under This Section.
 2. Pollutants found in Storm Water Discharges from Leather Tanning Operations.
 3. Options for Controlling Pollutants.
 4. Special Conditions.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Numeric Effluent Limitations.
 7. Monitoring and Reporting Requirements.
- AA. Storm Water Discharges Associated With Industrial Activity From Fabricated Metal Products Industry.
 1. Discharges Covered under this Section.
 2. Industry Profile.
 3. Storm Water Sampling Results.
 4. Options for Controlling Pollutants.
 5. Special Conditions.
 6. Storm Water Pollution Prevention Plan Requirements.
 7. Numeric Effluent Limitations.
 8. Monitoring and Reporting Requirements.
- AB. Storm Water Discharges Associated With Industrial Activity From Facilities That Manufacture Transportation Equipment, Industrial, or Commercial Machinery.
 1. Industry Profile.
 2. Pollutants Found in Storm Water Discharges From Facilities Which Manufacture Transportation Equipment, Industrial or Commercial Machinery.
 3. Options for Controlling Pollutants.
 4. Special Conditions.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Numeric Effluent Limitation.
 7. Monitoring and Reporting Requirements.
- AC. Storm Water Discharges Associated With Industrial Activity From Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods.
 1. Discharges Covered Under This Section.
 2. Pollutants Found in Storm Water Discharges.
 3. Options for Controlling Pollutants.
 4. Special Conditions.
 5. Storm Water Pollution Prevention Plan Requirements.
 6. Numeric Effluent Limitations.
 7. Monitoring and Reporting Requirements.
- IX. Paperwork Reduction Act
- X. 401 Certification.

Region I
Region II
Region III
Region IV
Region VI
Region IX
Region X

XI. Regulatory Flexibility Act

XII. Unfunded Mandates Reform Act

I. Background

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act (CWA)) was amended to provide that the discharge of any pollutant to waters of the United States from any point source is unlawful, except if the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit.

For a number of reasons, EPA and authorized NPDES States have failed to issue NPDES permits for the majority of point source discharges of storm water. Recognizing this, Congress added section 402(p) to the CWA in 1987 to establish a comprehensive framework for addressing storm water discharges under the NPDES program. Section 402(p)(4) of the CWA clarifies the requirements for EPA to issue NPDES permits for storm water discharges associated with industrial activity. On November 16, 1990 (55 FR 47990 as amended at 56 FR 12100, Mar. 21, 1991; 56 FR 56554, Nov. 5, 1991; 57 FR 11412, Apr. 2, 1992; 57 FR 60447, Dec. 18, 1992), EPA published final regulations which defined the term "storm water discharge associated with industrial activity." These regulations also set forth NPDES permit application requirements for storm water discharges associated with industrial activity and storm water discharges from certain municipal separate storm sewer systems. The regulations presented three permit application options for storm water discharges associated with industrial activity. The first option was to submit an individual application consisting of Forms 1 and 2F. The second option was to become a participant in a group application. The third option was coverage under a general permit in accordance with the requirements of an issued general permit.

The promulgation of today's general permit is in response to the second of these three options. Group applications were submitted in two parts. Part 1 of the application was due by September 30, 1991, and part 2 of the application was due by October 1, 1992. In part 1 of the application, all participants were identified and information on each facility was included, such as industrial activities, significant materials exposed to storm water, and material

management activities. For part 1 of the application, groups also identified sampling subgroups to submit sampling data for part 2. Over 1,200 groups with over 60,000 member facilities submitted part 1 applications. Upon review of the part 1 application, if the EPA determined that the application was an appropriate grouping of facilities with complete information provided on each participant, and a suitable sampling subgroup was proposed, the application was approved.

Part 2 of the application consisted of sampling data from each member of the sampling subgroup identified in part 1 of the application. In drafting today's general permit, EPA reviewed both parts of the applications and formulated the permit language noticed today. NPDES authorized States were provided the data from the group applications. Authorized NPDES States may propose and finalize either individual permits for each facility included in the application located in the State, or general permits, if the State has general permit authority.¹ If the State feels additional information is needed from the applicants, the State may ask each or any of the applicants for more information on their facility and/or discharge.

EPA estimates that about 100,000 facilities nationwide discharge storm water associated with industrial activity (not including oil and gas exploration and production operations) as described under phase I of the storm water program. The large number of facilities addressed by the regulatory definition of "storm water discharge associated with industrial activity" has placed a tremendous administrative burden on EPA and States with authorized NPDES programs to issue and administer permits for these discharges.

To provide a reasonable and rational approach to addressing this permitting task, the Agency has developed a strategy for issuing permits for storm water discharges associated with industrial activity. In developing this strategy, the Agency recognized that the CWA provides flexibility in the manner in which NPDES permits are issued,²

¹ As of December 1993, 39 of the 40 NPDES authorized State permitting programs had the authority to issue general permits.

² The court in *NRDC v. Train*, 396 F.Supp. 1393 (D.D.C. 1975) *aff'd*, *NRDC v. Costle*, 568 F.2d 1369 (D.C.Cir. 1977), has acknowledged the administrative burden placed on the Agency by requiring permits for a large number of storm water discharges. The courts have recognized EPA's discretion to use certain administrative devices, such as area permits or general permits, to help manage its workload. In addition, the courts have recognized flexibility in the type of permit conditions that can be established, including the use of requirements for best management practices.

and has used this flexibility to design a workable permitting system. In accordance with these considerations, the permitting strategy (described in more detail in 57 FR 11394) describes a four-tier set of priorities for issuing permits for these discharges:

Tier I—Baseline Permitting—One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity.

Tier II—Watershed Permitting—Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual or watershed-specific general permits.

Tier III—Industry-Specific Permitting—Specific industry categories will be targeted for individual or industry-specific general permits.

Tier IV—Facility-Specific Permitting—A variety of factors will be used to target specific facilities for individual permits.

The general permit accompanying this fact sheet will continue Phase 1 permitting activities for storm water discharges associated with industrial activity by providing industry-specific coverage to group applicants in the following areas: the States of Arizona, Florida, Idaho, Louisiana, Maine, Massachusetts, New Hampshire, New Mexico, Oklahoma, and Texas; the District of Columbia; Johnston Atoll, and Midway and Wake Islands; the Commonwealth of Puerto Rico; Federal Indian Reservations in Alaska, Arizona, California, Connecticut, Idaho, Louisiana, Maine, Massachusetts, Nevada, New Hampshire, New Mexico, Oklahoma, Oregon, Rhode Island, Texas, Utah (only the Navajo and Goshute Reservations), Vermont, and Washington; and Federal facilities located in Arizona, the Commonwealth of Puerto Rico, the District of Columbia, Delaware, Idaho, Johnston Atoll, Midway and Wake Islands, Vermont, and Washington.³ EPA will provide today's permit to the NPDES authorized States and encourages such States to consider this permit for their permitting needs.

II. Types of Discharges Covered

On November 16, 1990 (55 FR 47990), EPA promulgated the regulatory

³ In 5 of the 40 States that are authorized to issue NPDES permits for municipal and industrial sources, EPA issues permits for discharges from Federal facilities. EPA also retains authority to issue permits on Federal Indian Reservations. However, this fact sheet only addresses general permits as indicated above. Where EPA is the permit issuing authority for other storm water discharges, either individual permits or a different general permit will be issued.

definition of "storm water discharge associated with industrial activity" which addresses point source discharges of storm water from eleven major categories of industrial activities. Industrial activities from all of these categories with the exception of construction activities participated in the group application process. The information contained in the group applications indicates that type and amount of pollutants discharged in storm water varies from industrial activity to industrial activity because of the variety of potential pollutant sources present in different industrial activities, as well as the variety of pollution prevention measures commonly practiced by each of the regulated industries. To facilitate the process of developing permit conditions for each of the 1200 group applications submitted, EPA classified groups into 29 industrial sectors where the nature of industrial activity, type of materials handled and material management practices employed were sufficiently similar for the purposes of developing permit conditions. Each of the industrial sectors were represented by one or more groups which participated in the group application process. Table 1 lists each of the industrial activities covered by today's permit, and the corresponding sections of today's fact sheet and permit which discuss the specific requirements for that industry. EPA has further

divided some of the 29 sectors into subsectors in order to establish more specific and appropriate permit conditions, including best management practices and monitoring requirements. Coverage under today's general permit is available to storm water discharges from industrial activities represented by the group application process. However, coverage under this permit is not restricted to participants in the group application process. To limit coverage under this general permit only to those who participated in the Group application process would not be appropriate for administrative, environmental, and national consistency reasons. The administrative burden for EPA to develop separate general permits for non-group members would be excessive, unnecessary, and wasteful of tax dollars. EPA would also need to use the same information in the development of such permits. The permits would be essentially the same. The time spent in this process would leave many facilities unregulated for some number of additional months. This would not address the environmental concerns of the Clean Water Act. Likewise, group members are not precluded from seeking coverage under other available storm water permits such as EPA's "baseline" general permits for Storm Water Discharges Associated with Industrial Activity, (57 FR 41175 and 57 FR 44412). Group members must consider,

however, that the deadlines for preparing and implementing the pollution prevention plan required under the baseline permit have already expired for existing facilities. Therefore, group members that seek coverage under the baseline general permit must have a pollution prevention plan developed and implemented prior to NOI submittal.

Unlike the baseline general permits, today's permit does not exclude all storm water discharges subject to effluent limitation guidelines. Four types of storm water discharges subject to effluent limitation guidelines may be covered under today's permit if they are not already subject to an existing or expired NPDES permit. These discharges include contaminated storm water runoff from phosphate fertilizer manufacturing facilities, runoff associated with asphalt paving or roofing emulsion production, runoff from material storage piles at cement manufacturing facilities and coal pile runoff at steam electric generating facilities. The permit does not, however, authorize all storm water discharges subject to effluent guidelines. Storm water discharges subject to effluent guidelines under 40 CFR part 436 or for mine drainage under 40 CFR part 440 are not covered under today's permit nor are discharges subject to effluent guidelines for acid or alkaline mine drainage under 40 CFR part 434.

TABLE 1.—INDUSTRIAL ACTIVITIES COVERED BY TODAY'S GENERAL PERMIT

Industrial activity	Fact sheet section describing discharges covered	Permit section describing discharges covered
Timber Products Facilities	VIII.A	XI.A.
Paper and Allied Products Manufacturing Facilities	VIII.B	XI.B.
Chemical and Allied Products Manufacturing Facilities	VIII.C	XI.C.
Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers	VIII.D	XI.D.
Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities	VIII.E	XI.E.
Primary Metals Facilities	VIII.F	XI.F.
Metal Mining (Ore Mining and Dressing) Facilities	VIII.G	XI.G.
Coal Mines and Coal Mining-Related Facilities	VIII.H	XI.H.
Oil and Gas Extraction Facilities	VIII.I	XI.I.
Mineral Mining and Processing Facilities	VIII.J	XI.J.
Hazardous Waste Treatment, Storage, or Disposal Facilities	VIII.K	XI.K.
Landfills and Land Application Sites	VIII.L	XI.L.
Automobile Salvage Yards	VIII.M	XI.M.
Scrap and Waste Recycling Facilities	VIII.N	XI.N.
Steam Electric Power Generating Facilities, Including Coal Handling Areas	VIII.O	XI.O.
Vehicle Maintenance or Equipment Cleaning Areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Transportation Facilities, and the United States Postal Service.	VIII.P	XI.P.
Vehicle Maintenance Areas and/or Equipment Cleaning Operations at Water Transportation Facilities.	VIII.Q	XI.Q.
Ship and Boat Building or Repairing Yards	VIII.R	XI.R.
Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Area located at Air Transportation Facilities.	VIII.S	XI.S.
Treatment Works	VIII.T	XI.T.
Food and Kindred Products Facilities	VIII.U	XI.U.
Textile Mills, Apparel, and Other Fabric Product Manufacturing Facilities	VIII.V	XI.V.
Wood and Metal Furniture and Fixture Manufacturing Facilities	VIII.W	XI.W.

TABLE 1.—INDUSTRIAL ACTIVITIES COVERED BY TODAY'S GENERAL PERMIT—Continued

Industrial activity	Fact sheet section describing discharges covered	Permit section describing discharges covered
Printing and Publishing Facilities	VIII.X	XI.X.
Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	VIII.Y	XI.Y.
Leather Tanning and Finishing Facilities	VIII.Z	XI.Z.
Fabricated Metal Products Industry	VIII.AA	XI.AA.
Facilities That Manufacture Transportation Equipment, Industrial, or Commercial Machinery.	VIII.AB	XI.AB.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods.	VIII.AC	XI.AC.

A. Limitations on Coverage

Because of the broad scope of today's permit, most industrial activities currently regulated under the storm water program could be covered by the permit. There are, however, several types of storm water discharges which are not covered under today's permit. Storm water discharges subject to an existing NPDES permit are not covered under today's permit, except facilities which are currently subject to the baseline general permit. EPA believes that in most cases these discharges are more appropriately covered under terms and conditions of their existing permit. These discharges may be covered under today's permit only when the existing permit has expired and only when the expired permit did not contain numeric effluent limitations more stringent than those in today's permit. Owners/operators of facilities currently covered under the baseline general permit who wish to obtain coverage under today's general permit must submit a Notice of Termination (NOT) to terminate coverage under the baseline general permit with a Notice of Intent (NOI) to be covered under today's permit. Storm water discharges that were subject to an NPDES permit that was terminated by the permitting authority are not eligible for coverage under today's permit. Construction activities are not eligible for coverage under this permit. Storm water discharges that were subject to a permit that was terminated as a result of the permittee's request are eligible for coverage under today's permit. Storm water discharges from industrial activities that are not addressed in the appropriate section of Part XI. (see Table 1) of the permit are not eligible for coverage under this permit. These types of industrial activities were not represented in the group application process. Therefore, EPA has no additional information with which to develop permit requirements beyond those developed for the baseline general permit.

(1) Storm Water Discharges Subject to New Source Performance Standards.

Section 306 of the Clean Water Act requires EPA to develop performance standards for all new sources described in that section. These standards apply to all facilities which go into operation after the date the standards are promulgated. Section 511(c) of the Clean Water Act requires the Agency to comply with the National Environmental Policy Act prior to issuance of a permit under the authority of Section 402 of the CWA to facilities defined as a new source under Section 306.

Facilities which are subject to the performance standards for new sources as described in this section of the fact sheet must provide EPA with an Environmental Information Document pursuant to 40 CFR 6.101 prior to seeking coverage under this permit. This information shall be used by the Agency to evaluate the facility under the requirements of the National Environmental Policy Act (NEPA) in an Environmental Review. The Agency will make a final decision regarding the direct or indirect impact of the discharge. The Agency will follow all administrative procedures required in this process. The permittee must obtain a copy of the Agency's final finding prior to the submittal of a Notice of Intent to be covered by this general permit. In order to maintain eligibility, the permittee must implement any mitigation required of the facility as a result of the NEPA review process. Failure to implement mitigation measures upon which the Agency's NEPA finding is based is grounds for termination of permit coverage. In this way, EPA has established a procedure which allows for the appropriate review procedures to be completed by this Agency prior to the issuance of a permit under Section 402 of the CWA to an operator of a facility subject to the new source performance standards of Section 306 of the CWA. EPA believes that it has fulfilled its requirements under NEPA

for this federal action under Section 402 of the CWA.

(2) *Historic Preservation.* The National Historic Preservation Act (NHPA) prohibits Federal actions that would affect a property that either is listed on, or is eligible for listing, on the National Historic Register. EPA therefore cannot issue NPDES permits to discharges that will affect historic properties unless measures will be taken such as under a written agreement between the applicant and the State Historic Preservation Officer (SHPO) that outlines all measures to be undertaken by the applicant to mitigate or prevent adverse effects to the historic property. Therefore, under today's permit a storm water discharge may be covered only if the discharge will not affect a historic property that is listed or is eligible to be listed in the National Historic Register, or the operator has obtained and is in compliance with a written agreement signed by the State Historic Preservation Officer (SHPO) that outlines measures to be taken to mitigate or prevent adverse affects to the historic site.

(3) *Endangered Species.* The Endangered Species Act (ESA) of 1973 requires Federal Agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) that any actions authorized, funded, or carried out by the Agency (e.g., EPA issued NPDES permits authorizing discharges to waters of the United States) are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species (see 16 U.S.C. 1536(a)(2), 50 CFR 402 and 40 CFR 122.49(c)). EPA completed a formal consultation with the Services on the action of issuing this permit on April 5, 1995. The terms and conditions of this permit reflect the results of that consultation.

Accordingly, storm water discharges that are likely to adversely affect species identified in Addendum H of the permit are not authorized permit coverage

under this storm water multi-sector industrial general permit. Permittees are also not authorized permit coverage if the BMPs they plan to construct and operate as a part of the required storm water pollution prevention plan are likely to adversely affect a species identified in Addendum H.

To be eligible for coverage under the multi-sector storm water permit, applicants are required to review the list of species and their locations which are contained in Addendum H of this permit and which are described in the instructions for completing the application requirements under this permit. If an applicant determines that none of the species identified in the addendum are found in the county in which the facility is located, then there is no likelihood of an adverse effect and they are eligible for permit coverage. Applicants must then certify that their discharges, and the construction of storm water BMPs, are not likely to adversely affect species and will be granted multi-sector storm water permit coverage 48 hours after the date of the postmark on the envelope used to mail in the NOI form.

If species identified in Addendum H are found to be located in the same county as the facility seeking storm water permit coverage, then the applicant next must determine whether the species are in proximity to the storm water discharges at the facility, or any BMPs to be constructed to control storm water runoff. A species is in proximity to a storm water discharge when the species is located in the path or down gradient area through which or over which point source storm water flows from industrial activities to the point of discharge into the receiving water, and once discharged into the receiving water, in the immediate vicinity of, or nearby, the discharge point. A species is also in proximity if a species is located in the area of a site where storm water BMPs are planned to be constructed. If an applicant determines there are no species in proximity to the storm water discharge, or the BMPs to be constructed, then there is no likelihood of adversely affecting the species and the applicant is eligible for permit coverage.

If species are in proximity to the storm water discharges or areas of BMP construction, as long as they have been considered as part of a previous ESA authorization of the applicant's activity, and the environmental baseline established in that authorization is unchanged, the applicant may be covered under the permit. For example, an applicant's activity may have been authorized as part of a section 7

consultation under ESA, covered under a section 10 permit, or have received a clearance letter. The environmental baseline generally includes the past and present impacts of all federal, state and private actions that were contemporaneous to an ESA authorization. Therefore, if a permit applicant has received previous authorization and nothing has changed or been added to the environmental baseline established in the previous authorization, then coverage under this permit will be provided.

In the absence of such previous authorization, if species identified in Addendum H are in proximity to the discharges, or the construction areas for the BMPs, then the applicant must determine whether there is any likely adverse effect upon the species. This is done by the applicant conducting a further examination or investigation, or an alternative procedure, described in the instructions in Addendum H of the permit. If the applicant determines there is no likely adverse effect upon the species, then the applicant is eligible for permit coverage. If the applicant determines that there likely is, or will likely be an adverse effect, then the applicant is not eligible for multi-sector storm water permit coverage.

All dischargers applying for coverage under this permit must provide in the application information on the Notice of Intent form: (1) a determination as to whether there are any species identified in Addendum H in proximity to the storm water discharges and BMPs construction areas, and (2) a certification that their storm water discharges and the construction of BMPs to control storm water are not likely to adversely affect species identified in Addendum H, or are otherwise eligible for coverage due to a previous authorization under the ESA. Coverage is contingent upon the applicant's providing truthful information concerning certification and abiding by any conditions imposed by the permit.

Dischargers who are not able to determine that there will be no likely adverse effect to species or habitats and cannot sign the certification to gain coverage under this multi-sector storm water general permit, must apply to EPA for an individual NPDES storm water permit. As appropriate, EPA will conduct ESA § 7 consultation when issuing such individual permits.

Regardless of the above conditions, EPA may require that a permittee apply for an individual NPDES permit on the basis of possible adverse effects on species or critical habitats. Where there are concerns that coverage for a

particular discharger is not sufficiently protective of listed species, the Services (as well as any other interested parties) may petition EPA to require that the discharger obtain an individual NPDES permit and conduct an individual section 7 consultation as appropriate.

In addition, the Assistant Administrator for Fisheries for the National Oceanic and Atmospheric Administration, or his/her authorized representative, or the U.S. Fisheries and Wildlife Service (as well as any other interested parties) may petition EPA to require that a permittee obtain an individual NPDES permit. The permittee is also required to make the storm water pollution prevention plan, annual site compliance inspection report, or other information available upon request to the Assistant Administrator for Fisheries for the National Oceanic and Atmospheric Administration, or his/her authorized representative, or the U.S. Fisheries and Wildlife Service Regional Director, or his/her authorized representative.

These mechanisms allow for the broadest and most efficient coverage for the permittee while still providing for the most efficient protection of endangered species. It significantly reduces the number of dischargers that must be considered individually and therefore allows the Agency and the Services to focus their resources on those discharges that are indeed likely to adversely affect water-dependent listed species. Straightforward mechanisms such as these allow applicants with expedient permit coverage, and eliminates "permit limbo" for the greatest number of permitted discharges. At the same time it is more protective of endangered species because it allows both agencies to focus on the real problems, and thus, provide endangered species protection in a more expeditious manner.

(4) Storm Water Discharges Associated with Inactive Mines, Landfills, Oil and Gas Operations that Are Located on Federal Lands.

The permit does not cover storm water discharges associated with industrial activity from inactive mines, inactive landfills, and inactive oil and gas operations that are located on Federal lands, unless an operator of the industrial activity can be identified. These discharges are not eligible for coverage under this permit because they would more appropriately be covered by the permit currently under development by EPA intended specifically to cover these types of discharges.

III. Pollutants in Storm Water Discharges Associated with Industrial Activities in General

The volume and quality of storm water discharges associated with industrial activity will depend on a number of factors, including the industrial activities occurring at the facility, the nature of precipitation, and the degree of surface imperviousness. A discussion of these factors is provided in the proposed general permit (see FR 58 61146 Nov. 19, 1993).

IV. Summary of Options for Controlling Pollutants

Pollutants in storm water discharges from industrial plants may be reduced using the following methods: eliminating pollution sources, implementing Best Management Practices to prevent pollution, using traditional storm water management practices, and providing end-of-pipe treatment. Each of these is discussed in the proposed general permit (see 58 FR 61146, Nov. 19, 1993).

V. The Federal/Municipal Partnership: The Role of Municipal Operators of Large and Medium Municipal Separate Storm Sewer Systems

A key issue in developing a workable regulatory program for controlling pollutants in storm water discharges associated with industrial activity is the proper use and coordination of limited regulatory resources. This is especially important when addressing the appropriate role of municipal operators of large and medium municipal separate storm sewer systems in the control of pollutants in storm water associated with industrial activity which discharge through municipal separate storm sewer systems. The proposed general permit discussed several key policy factors (see 58 FR 61146).

VI. Summary of Common Permit Conditions

The following section describes the permit conditions common to discharges from all the industrial activities covered by today's permit. These conditions were proposed on November 19, 1993 (58 FR 61146), and reflect the baseline permit requirements established for most regulated industries in EPA's General Permits for Storm Water Discharges Associated with Industrial Activity [57 FR 41344-41356 September 9, 1992, and 57 FR 44438-44470 September 25, 1992]. Permit requirements which vary from industry to industry are discussed in Part VIII of this fact sheet.

A. Notification Requirements

General permits for storm water discharges associated with industrial activity require the submittal of an NOI prior to the authorization of such discharges (see 40 CFR 122.28(b)(2)(i), April 2, 1992 [57 FR 11394]). Consistent with these regulatory requirements, today's general permit establishes NOI requirements that operate in addition to the part 1 and part 2 group application requirements. To be covered under this permit, facilities, including members of an approved group, must submit an NOI and other required information within 90 days of the effective date of this permit. The NOI form is found in Addendum B.

1. Contents of NOIs

a. The operator's name, address, telephone number, and status as Federal, State, private, public, or other entity.

b. Street address of the facility for which the notification is submitted. Where a street address for the site is not available, the location can be described in terms of the latitude and longitude of the facility to the nearest 15 seconds, or the quarter, section, township, and range (to the nearest quarter section) of the approximate center of the site.

c. An indication of whether the facility is located on Federal Indian Reservations.

d. Up to four 4-digit Standard Industrial Classification (SIC) codes that best represent the principal products or activities provided by the facility. For hazardous waste treatment, storage, or disposal facilities, land disposal facilities that receive or have received any industrial waste, steam electric power generating facilities, or treatment works treating domestic sewage, a 2-character code must be provided.

e. The permit number of any NPDES permit for any discharge (including non-storm water discharges) from the site that is currently authorized by an NPDES permit.

f. The name of the receiving water(s), or if the discharge is through a municipal separate storm sewer, the name of the municipal operator of the storm sewer and the receiving water(s) for the discharge through the municipal separate storm sewer.

g. The analytical monitoring status of the facility (monitoring or not).

h. For a co-permittee, if a storm water general permit number has been issued, it should be included.

i. A certification that the operator of the facility has read and understands the eligibility requirements for the permit and that the operator believes the

facility to be in compliance with those requirements.

j. Identify type of permit requested (either baseline general, multi-sector, or construction); longitude and latitude; indication of presence of endangered species; indication of historic preservation agreement; signed certification stating compliance with the National Historic Preservation Act, Endangered Species Act, and the new source performance standard requirements.

k. For any facility that begins to discharge storm water associated with industrial activity after [insert date 270 days after permit finalization], a certification that a storm water pollution prevention plan has been prepared for the facility in accordance with Part IV of this permit. (A copy of the plan should not be included with the NOI submission.)

An NOI form is provided in Addendum B. The NOI must be signed in accordance with the signatory requirements of 40 CFR 122.22. A complete description of these signatory requirements is provided in the instructions accompanying the NOI. Completed NOI forms must be submitted to the Storm Water Notice of Intent (4203), 401 M Street SW., Washington, DC 20460.

2. Deadlines

Except for the special circumstances discussed below, dischargers who intend to obtain coverage under this permit for a storm water discharge from an industrial activity that is in existence prior to the date 90 days after permit issuance must submit an NOI on or before the date 90 days after permit issuance, and facilities that begin industrial activities after the date 90 days after permit issuance are required to submit an NOI at least 2 days prior to the commencement of the new industrial activity.

A discharger is not precluded from submitting an NOI at a later date. However, in such instances, EPA may bring appropriate enforcement actions.

The storm water regulations (40 CFR 122.27) require that facilities that discharge storm water associated with an industrial activity submit an application for permit coverage on or before October 1, 1992, except industrial activities owned or operated by a medium municipality, which had until May 17, 1993. Today's permit does not extend that application deadline. EPA intends that most of the facilities that will seek coverage under the final version of today's permit are: members of groups with approved applications; facilities that submitted a Notice of

Intent to be covered by EPA's baseline general permit and now wish to switch to coverage under today's permit; or have submitted a complete individual application but have not yet received an individual permit.

EPA may deny coverage under this permit and require submittal of an individual NPDES permit application based on a review of the completeness and/or content of the NOI or other information (e.g., Endangered Species Act compliance, National Historic Preservation Act Compliance, water quality information, compliance history, history of spills, etc.). Where EPA requires a discharger authorized under this general permit to apply for an individual NPDES permit (or an alternative general permit), EPA will notify the discharger in writing that a permit application (or different NOI) is required by an established deadline. Coverage under this industry general permit will automatically terminate if the discharger fails to submit the required permit application in a timely manner. Where the discharger does submit a requested permit application, coverage under this general permit will automatically terminate on the effective date of the issuance or denial of the individual NPDES permit or the alternative general permit as it applies to the individual permittee. Compliance deadlines are discussed in Part VI.H. of this fact sheet.

Municipal Separate Storm Sewer System Operator Notification

Operators of storm water discharges associated with industrial activity that discharge through a large or medium municipal separate storm sewer system or a municipal system designated by the Director,⁴ must notify the municipal operator of the system receiving the discharge and submit a copy of their NOI to the municipal operator.

4. Notice of Termination

Where a discharger is able to eliminate the storm water discharges associated with industrial activity from a facility, the discharger may submit a Notice of Termination (NOT) form (or photocopy thereof) provided by the Director.

A copy of the NOT and instructions for completing the NOT are included in

⁴The terms large and medium municipal separate storm sewer systems (systems serving a population of 100,000 or more) are defined at 40 CFR 122.26(b) (4) and (7). Some of the cities and counties in which these systems are found are listed in Appendices F, G, H, and I to 40 CFR Part 122. Other municipal systems have been designated by EPA on a case-by-case basis or have brought into the program based upon the 1990 Census.

Addendum C. The NOT form requires the following information:

a. Name, mailing address, and location of the facility for which the notification is submitted. Where a street address for the site is not available, the location of the approximate center of the site must be described in terms of the latitude and longitude to the nearest 15 seconds, or the section, township and range to the nearest quarter;

b. The name, address and telephone number of the operator addressed by the Notice of Termination;

c. The NPDES permit number for the storm water discharge associated with industrial activity identified by the NOT;

d. An indication of whether the storm water discharges associated with industrial activity have been eliminated or the operator of the discharges has changed; and

e. The following certification:

I certify under penalty of law that all storm water discharges associated with industrial activity from the identified facility that are authorized by an NPDES general permit have been eliminated or that I am no longer the operator of the industrial activity. I understand that by submitting this Notice of Termination I am no longer authorized to discharge storm water associated with industrial activity under this general permit, and that discharging pollutants in storm water associated with industrial activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by an NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

NOTs are to be sent to the Storm Water Notice of Termination (4203), 401 M Street, SW., Washington, DC 20460.

The NOT must be signed in accordance with the signatory requirements of 40 CFR 122.22. A complete description of these signatory requirements is provided in the instructions accompanying the NOT.

B. Special Conditions

The conditions of this permit have been designed to comply with the technology-based standards of the CWA (BAT/BCT). Based on a consideration of the appropriate factors for BAT and BCT requirements, and a consideration of the factors and options discussed in this fact sheet for controlling pollutants in storm water discharges associated with industrial activity, the general permit lists a set of tailored requirements for developing and implementing storm water pollution prevention plans, and

for selected discharges, effluent limitations.⁵

Part VIII. of this fact sheet summarizes the options for controlling pollutants in storm water discharges associated with industrial activity. The permit includes numeric effluent limitations for coal pile runoff, contaminated runoff from fertilizer manufacturing facilities, runoff from asphalt emulsion manufacturing facilities, and material storage pile runoff located at cement manufacturing facilities or cement kilns.

For other discharges covered by the permit, the permit conditions reflect EPA's decision to identify a number of best management practices and traditional storm water management practices which prevent pollution in storm water discharges as the BAT/BCT level of control for the majority of storm water discharges covered by this permit. The permit conditions applicable to these discharges are not numeric effluent limitations, but rather are flexible requirements for developing and implementing site specific plans to minimize and control pollutants in storm water discharges associated with industrial activity. This approach is consistent with the approach used in the baseline general permits finalized on September 9, 1992 (57 FR 41236) and September 25, 1992 (57 FR 44438). In addition, today's general permit reflects information received through the group application process.

EPA is authorized under 40 CFR 122.44(k)(2) to impose BMPs in lieu of numeric effluent limitations in NPDES permits when the Agency finds numeric effluent limitations to be infeasible. EPA may also impose BMPs which are "reasonably necessary * * * to carry out the purposes of the Act" under 40 CFR 122.44(k)(3). Both of these standards for imposing BMPs were recognized in *NRDC v. Costle*, 568 F.2d 1369, 1380 (D.C. Cir. 1977). The conditions in the permit are issued under the authority of both of these regulatory provisions. The pollution prevention or BMP requirements in this permit operate as limitations on effluent discharges that reflect the application of BAT/BCT. This is because the BMPs identified require the use of source

⁵Part I.C.2 of the general permit provides that facilities with storm water discharges associated with industrial activity which, based on an evaluation of site specific conditions, believe that the appropriate conditions of this permit do not adequately represent BAT and BCT requirements for the facility may submit to the Director an individual application (Form 1 and Form 2F). A detailed explanation of the reasons why the conditions of the available general permits do not adequately represent BAT and BCT requirements for the facility as well as any supporting documentation must be included.

control technologies which, in the context of this general permit, are the best available of the technologies economically achievable (or the equivalent BCT finding). See *NRDC v. EPA*, 822 F.2d 104, 122-23 (D.C. Cir. 1987) (EPA has substantial discretion to impose nonquantitative permit requirements pursuant to Section 402(a)(1)).

1. Prohibition of Non-storm Water Discharges

Today's general permit does not authorize non-storm water discharges that are mixed with storm water except as provided below. The only non-storm water discharges that are intended to be authorized under today's permit include discharges from fire fighting activities; fire hydrant flushings; potable water sources, including waterline flushings; irrigation drainage; lawn watering; routine external building washdown without detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used; air conditioning condensate; compressor condensate; springs; uncontaminated ground water; and foundation or footing drains where flows are not contaminated with process materials such as solvents that are combined with storm water discharges associated with industrial activity.

To be authorized under the general permit, these sources of non-storm water (except flows from fire fighting activities) must be identified in the storm water pollution prevention plan prepared for the facility. (Plans and other plan requirements are discussed in more detail below). Where such discharges occur, the plan must also identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

Today's permit does not require pollution prevention measures to be identified and implemented for non-storm water flows from fire-fighting activities because these flows will generally be unplanned emergency situations where it is necessary to take immediate action to protect the public.

The prohibition of unpermitted non-storm water discharges in this permit ensures that non-storm water discharges (except for those classes of non-storm water discharges that are conditionally authorized in Part III.A.2.b.) are not inadvertently authorized by this permit. Where a storm water discharge is mixed with non-storm water that is not authorized by today's general permit or another NPDES permit, the discharger

should submit the appropriate application forms (Forms 1, 2C, and/or 2E) to gain permit coverage of the non-storm water portion of the discharge.

2. Releases of Reportable Quantities of Hazardous Substances and Oil

a. This general permit provides that the discharge of hazardous substances or oil from a facility must be eliminated or minimized in accordance with the storm water pollution plan developed for the facility. Where a permitted storm water discharge contains a hazardous substance or oil in an amount equal to or in excess of a reporting quantity established under 40 CFR Part 117, or 40 CFR Part 302 during a 24-hour period, the following actions must be taken:

(1) Any person in charge of the facility that discharges hazardous substances or oil is required to notify the National Response Center (NRC) (800-424-8802; in the Washington, DC, metropolitan area, 202-426-2675) in accordance with the requirements of 40 CFR Part 117, and 40 CFR Part 302 as soon as they have knowledge of the discharge.

(2) The storm water pollution prevention plan for the facility must be modified within 14 calendar days of knowledge of the release to provide a description of the release, an account of the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and it must be modified where appropriate.

(3) The permittee must also submit to EPA within 14 calendar days of knowledge of the release a written description of the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and steps to be taken to modify the pollution prevention plan for the facility.

b. Anticipated discharges containing a hazardous substance in an amount equal to or in excess of reporting quantities are those caused by events occurring within the scope of the relevant operating system. Facilities that have more than 1 anticipated discharge per year containing a hazardous substance in an amount equal to or in excess of a reportable quantity are required to:

(1) Submit notifications of the first release that occurs during a calendar year (or for the first year of this permit, after submittal of an NOI); and

(2) Provide a written description in the storm water pollution prevention plan of the dates on which such releases

occurred, the type and estimate of the amount of material released, and the circumstances leading to the releases. In addition, the pollution prevention plan must address measures to minimize such releases.

c. Where a discharge of a hazardous substance or oil in excess of reporting quantities is caused by a non-storm water discharge (e.g., a spill of oil into a separate storm sewer), that discharge is not authorized by this permit and the discharger must report the discharge as required under 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302. In the event of a spill, the requirements of Section 311 of the CWA and other applicable provisions of Sections 301 and 402 of the CWA continue to apply. This approach is consistent with the requirements for reporting releases of hazardous substances and oil that make a clear distinction between hazardous substances typically found in storm water discharges and those associated with spills that are not considered part of a normal storm water discharge (see 40 CFR 117.12(d)(2)(i)).

3. Co-located Industrial Facilities

Today's general permit addresses storm water discharges from industrial activities co-located at an industrial facility described in the coverage section of the permit. Co-located industrial activities occur when activities being conducted onsite meet more than one of the descriptions in the coverage sections of Part XI. of this permit (e.g., a landfill at a wood treatment facility or a vehicle maintenance garage at an asphalt batching plant). Co-located industrial activities are authorized under today's general permit provided that the industrial facility complies with the pollution prevention plan and monitoring requirements for each co-located activity.

Authorizing co-located discharges allows industrial facilities to develop pollution prevention plans that fully address all industrial activities at the site. For example, if a wood treatment facility has a landfill, the pollution prevention plan requirements for the wood treatment facility will differ greatly from those needed for a landfill. Therefore, by authorizing co-located industrial activities, the wood treatment facility will develop a pollution prevention plan to meet the requirements addressing the storm water discharges from the wood treatment facility and the landfill. The facility is also subject to applicable monitoring requirements for each type of industrial activity as described in the applicable sections of the permit. By

monitoring the discharges from the different industrial activities, the facility can better determine the effectiveness of the pollution prevention plan requirements for controlling storm water discharges from all activities.

C. Common Pollution Prevention Plan Requirements

All facilities intended to be covered by today's general permit for storm water discharges associated with industrial activity must prepare and implement a storm water pollution prevention plan. The storm water permit addresses pollution prevention

plan requirements for a number of categories of industries. The following is a discussion of the common permit requirements for all industries; special requirements for storm water discharges associated with industrial activity through large and medium municipal separate storm sewer systems; special requirements for facilities subject to EPCRA Section 313 reporting requirements; and special requirements for facilities with outdoor salt storage piles. These are the permit requirements which apply to discharges associated with any of the industrial activities covered by today's permit. These

common requirements may be amended or further clarified in the industry-specific pollution prevention plan requirements. Table 2 indicates the location of the industry-specific pollution prevention plans. These industry-specific requirements are additive for facilities where co-located industrial activities occur. For example, if a facility has both a sand and gravel mining operation and a ready mix concrete manufacturing operation, then that facility is subject to the pollution prevention plan requirements in both Part XI.E.3. and Part XI.J.3. of the permit.

TABLE 2.—STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

Industrial activity	Fact sheet section describing PPP requirements	Permit section describing PPP requirements
Timber Products Facilities	VIII.A.7	XI.A.3.
Paper and Allied Products Manufacturing Facilities	VIII.B.5	XI.B.3.
Chemical and Allied Products Manufacturing Facilities	VIII.C.6	XI.C.4.
Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers	VIII.D.4	XI.D.3.
Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities	VIII.E.5	XI.E.3.
Primary Metals Facilities	VIII.F.6	XI.F.3.
Metal Mining (Ore Mining and Dressing) Facilities	VIII.G.5	XI.G.3.
Coal Mines and Coal Mining-Related Facilities	VIII.H.4	XI.H.3.
Oil and Gas Extraction Facilities	VIII.I.5	XI.I.3.
Mineral Mining and Processing Facilities	VIII.J.4	XI.J.3.
Hazardous Waste Treatment, Storage, or Disposal Facilities	VIII.K.5	XI.K.3.
Landfills and Land Application Sites	VIII.L.5	XI.L.3.
Automobile Salvage Yards	VIII.M.5	XI.M.2.
Scrap and Waste Recycling Facilities	VIII.N.5	XI.N.3.
Steam Electric Power Generating Facilities, Including Coal Handling Areas	VIII.O.5	XI.O.3.
Vehicle Maintenance or Equipment Cleaning Areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Transportation Facilities, and the United States Postal Service Transportation Facilities.	VIII.P.5	XI.P.3.
Vehicle Maintenance Areas and/or Equipment Cleaning Operations at Water Transportation Facilities.	VIII.Q.5	XI.Q.3.
Ship and Boat Building or Repairing Yards	VIII.R.6	XI.R.3.
Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities.	VIII.S.4	XI.S.3.
Treatment Works	VIII.T.5	XI.T.3.
Food and Kindred Products Facilities	VIII.U.4	XI.U.3.
Textile Mills, Apparel, and Other Fabric Product Manufacturing Facilities	VIII.V.5	XI.V.3.
Wood and Metal Furniture and Fixture Manufacturing Facilities	VIII.W.4	XI.W.3.
Printing and Publishing Facilities	VIII.X.5	XI.X.3.
Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries	VIII.Y.4	XI.Y.3.
Leather Tanning and Finishing Facilities	VIII.Z.5	XI.Z.3.
Fabricated Metal Products Industry	VIII.AA.3	XI.AA.3.
Facilities That Manufacture Transportation Equipment, Industrial, or Commercial Machinery.	VIII.AB.5	XI.AB.3.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods.	VIII.AC.5	XI.AC.3.

The pollution prevention approach in today's general permit focuses on two major objectives: (1) to identify sources of pollution potentially affecting the quality of storm water discharges associated with industrial activity from the facility; and (2) to describe and ensure implementation of practices to minimize and control pollutants in storm water discharges associated with industrial activity from the facility and

to ensure compliance with the terms and conditions of this permit.

The storm water pollution prevention plan requirements in the general permit are intended to facilitate a process whereby the operator of the industrial facility thoroughly evaluates potential pollution sources at the site and selects and implements appropriate measures designed to prevent or control the discharge of pollutants in storm water

runoff. The process involves the following four steps: (1) Formation of a team of qualified plant personnel who will be responsible for preparing the plan and assisting the plant manager in its implementation; (2) assessment of potential storm water pollution sources; (3) selection and implementation of appropriate management practices and controls; and (4) periodic evaluation of the effectiveness of the plan to prevent

storm water contamination and comply with the terms and conditions of this permit. The authorization to include best management practices in the permit to control or abate the discharge of pollutants is derived from 40 CFR 144.45(k).

EPA believes the pollution prevention approach is the most environmentally sound and cost-effective way to control the discharge of pollutants in storm water runoff from industrial facilities. This position is supported by the results of a comprehensive technical survey EPA completed in 1979.⁶ The survey found that two classes of management practices are generally employed at industries to control the nonroutine discharge of pollutants from sources such as storm water runoff, drainage from raw material storage and waste disposal areas, and discharges from places where spills or leaks have occurred. The first class of management practices includes those that are low in cost, applicable to a broad class of industries and substances, and widely considered essential to a good pollution control program. Some examples of practices in this class are good housekeeping, employee training, and spill response and prevention procedures. The second class includes management practices that provide a second line of defense against the release of pollutants. This class addresses containment, mitigation, and cleanup. Since publication of the 1979 survey, EPA has imposed management practices and controls in NPDES permits on a case-by-case basis. The Agency also has continued to review the appropriateness and effectiveness of such practices,⁷ as well as the techniques used to prevent and contain oil spills.⁸ Experience with these practices and controls has shown that they can be used in permits to reduce pollutants in storm water discharges in

a cost-effective manner. In keeping with both the present and previous administration's objective to attain environmental goals through pollution prevention, pollution prevention has been and continues to be the cornerstone of the NPDES Permitting program for storm water. EPA has developed guidance entitled "Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices," September 1992, to assist permittees in developing and implementing pollution prevention measures.

1. Pollution Prevention Team

As a first step in the process of developing and implementing a storm water pollution prevention plan, permittees are required to identify a qualified individual or team of individuals to be responsible for developing the plan and assisting the facility or plant manager in its implementation. When selecting members of the team, the plant manager should draw on the expertise of all relevant departments within the plant to ensure that all aspects of plant operations are considered when the plan is developed. The plan must clearly describe the responsibilities of each team member as they relate to specific components of the plan. In addition to enhancing the quality of communication between team members and other personnel, clear delineation of responsibilities will ensure that every aspect of the plan is addressed by a specified individual or group of individuals. Pollution Prevention Teams may consist of one individual where appropriate (e.g., in certain small businesses with limited storm water pollution potential).

2. Description of Potential Pollution Sources

Each storm water pollution prevention plan must describe activities, materials, and physical features of the facility that may contribute significant amounts of pollutants to storm water runoff or, during periods of dry weather, result in pollutant discharges through the separate storm sewers or storm water drainage systems that drain the facility. This assessment of storm water pollution risk will support subsequent efforts to identify and set priorities for necessary changes in materials, materials management practices, or site features, as well as aid in the selection of appropriate structural and nonstructural control techniques. Some operators may find that significant

amounts of pollutants are running onto the facility property. Such operators should identify and address the contaminated runoff in the storm water pollution prevention plan. If the runoff cannot be addressed or diverted by the permittee, the permitting authority should be notified. If necessary, the permitting authority may require the operator of the adjacent facility to obtain a permit.

Part XI of the permit includes specific requirements for the various industry sectors covered by today's permit. The storm water pollution prevention plans generally must describe the following elements:

a. Drainage. The plan must contain a map of the site that shows the location of outfalls covered by the permit (or by other NPDES permits), the pattern of storm water drainage, an indication of the types of discharges contained in the drainage areas of the outfalls, structural features that control pollutants in runoff,⁹ surface water bodies (including wetlands), places where significant materials¹⁰ are exposed to rainfall and runoff, and locations of major spills and leaks that occurred in the 3 years prior to the date of the submission of a Notice of Intent (NOI) to be covered under this permit. The map also must show areas where the following activities take place: fueling, vehicle and equipment maintenance and/or cleaning, loading and unloading, material storage (including tanks or other vessels used for liquid or waste storage), material processing, and waste disposal. For areas of the facility that generate storm water discharges with a reasonable potential to contain significant amounts of pollutants, the map must indicate the probable direction of storm water flow and the pollutants likely to be in the discharge. Flows with a significant potential to cause soil erosion also must be identified. 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.

b. Inventory of Exposed Materials. Facility operators are required to

⁹Nonstructural features such as grass swales and vegetative buffer strips also should be shown.

¹⁰Significant materials include, but are not limited to the following: raw materials; fuels; solvents, detergents, and plastic pellets; finished materials, such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); any chemical the facility is required to report pursuant to EPCRA Section 313; fertilizers; pesticides; and waste products, such as ashes, slag, and sludge that have the potential to be released with storm water discharges. (See 40 CFR 122.26(b)(8)).

⁶See "Storm Water Management for Industrial Activities," EPA, September 1992, EPA-832-R-92-006.

⁷For example, see "Best Management Practices: Useful Tools for Cleaning Up," Thron, H., Rogoszewski, P., 1982, Proceedings of the 1982 Hazardous Material Spills Conference; "The Chemical Industries' Approach to Spill Prevention," Thompson, C., Goodier, J. 1980, Proceedings of the 1980 National Conference of Control of Hazardous Materials Spills; a series of EPA memorandum entitled "Best Management Practices in NPDES Permits—Information Memorandum," 1983, 1985, 1986, 1987, 1988; Review of Emergency Systems: Report to Congress," EPA, 1988; and "Analysis of Implementing Permitting Activities for Storm Water Discharges Associated with Industrial Activity," EPA, 1991.

⁸See for example, "The Oil Spill Prevention, Control and Countermeasures Program Task Force Report," EPA, 1988; and "Guidance Manual for the Development of an Accidental Spill Prevention Program," prepared by SAIC for EPA, 1986.

carefully conduct an inspection of the site and related records to identify significant materials that are or may be exposed to storm water. The inventory must address materials that within 3 years prior to the date of the submission of a Notice of Intent (NOI) to be covered under this permit have been handled, stored, processed, treated, or disposed of in a manner to allow exposure to storm water. Findings of the inventory must be documented in detail in the pollution prevention plan. At a minimum, the plan must describe the method and location of onsite storage or disposal; practices used to minimize contact of materials with rainfall and runoff; existing structural and nonstructural controls that reduce pollutants in runoff; and any treatment the runoff receives before it is discharged to surface waters or a separate storm sewer system. The description must be updated whenever there is a significant change in the types or amounts of materials, or material management practices, that may affect the exposure of materials to storm water.

c. Significant Spills and Leaks. The plan must include a list of any significant spills and leaks of toxic or hazardous pollutants that occurred in the 3 years prior to the date of the submission of a Notice of Intent (NOI) to be covered under this permit. Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under Section 311 of CWA (see 40 CFR 110.10 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (see 40 CFR 302.4). Significant spills may also include releases of oil or hazardous substances that are not in excess of reporting requirements and releases of materials that are not classified as oil or a hazardous substance.

The listing should include a description of the causes of each spill or leak, the actions taken to respond to each release, and the actions taken to prevent similar such spills or leaks in the future. This effort will aid the facility operator as she or he examines existing spill prevention and response procedures and develops any additional procedures necessary to fulfill the requirements of Part XI. of this permit.

d. Non-storm Water Discharges. Each pollution prevention plan must include a certification, signed by an authorized individual, that discharges from the site have been tested or evaluated for the presence of non-storm water discharges. The certification must describe possible

significant sources of non-storm water, the results of any test and/or evaluation conducted to detect such discharges, the test method or evaluation criteria used, the dates on which tests or evaluations were performed, and the onsite drainage points directly observed during the test or evaluation. Acceptable test or evaluation techniques include dye tests, television surveillance, observation of outfalls or other appropriate locations during dry weather, water balance calculations, and analysis of piping and drainage schematics.¹¹

Except for flows that originate from fire fighting activities, sources of non-storm water that are specifically identified in the permit as being eligible for authorization under the general permit must be identified in the plan. Pollution prevention plans must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water discharge.

EPA recognizes that certification may not be feasible where facility personnel do not have access to an outfall, manhole, or other point of access to the conduit that ultimately receives the discharge. In such cases, the plan must describe why certification was not feasible. Permittees who are not able to certify that discharges have been tested or evaluated must notify the Director in accordance with Part XI. of the permit.

e. Sampling Data. Any existing data on the quality or quantity of storm water discharges from the facility must be described in the plan, including data collected for part 2 of the group application process. These data may be useful for locating areas that have contributed pollutants to storm water. The description should include a discussion of the methods used to collect and analyze the data. Sample collection points should be identified in the plan and shown on the site map.

f. Summary of Potential Pollutant Sources. The description of potential pollution sources culminates in a narrative assessment of the risk potential that sources of pollution pose to storm water quality. This assessment should clearly point to activities, materials, and physical features of the facility that have a reasonable potential to contribute significant amounts of pollutants to storm water. Any such activities, materials, or features must be addressed by the measures and controls subsequently described in the plan. In conducting the assessment, the facility

operator must consider the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and onsite waste disposal practices. The assessment must list any significant pollution sources at the site and identify the pollutant parameter or parameters (i.e., biochemical oxygen demand, suspended solids, etc.) associated with each source.

3. Measures and Controls

Following completion of the source identification and assessment phase, the permit requires the permittee to evaluate, select, and describe the pollution prevention measures, best management practices (BMPs), and other controls that will be implemented at the facility. BMPs include processes, procedures, schedules of activities, prohibitions on practices, and other management practices that prevent or reduce the discharge of pollutants in storm water runoff.

EPA emphasizes the implementation of pollution prevention measures and BMPs that reduce possible pollutant discharges at the source. Source reduction measures include, among others, preventive maintenance, chemical substitution, spill prevention, good housekeeping, training, and proper materials management. Where such practices are not appropriate to a particular source or do not effectively reduce pollutant discharges, EPA supports the use of source control measures and BMPs such as material segregation or covering, water diversion, and dust control. Like source reduction measures, source control measures and BMPs are intended to keep pollutants out of storm water. The remaining classes of BMPs, which involve recycling or treatment of storm water, allow the reuse of storm water or attempt to lower pollutant concentrations prior to discharge.

The pollution prevention plan must discuss the reasons each selected control or practice is appropriate for the facility and how each will address one or more of the potential pollution sources identified in the plan. The plan also must include a schedule specifying the time or times during which each control or practice will be implemented. In addition, the plan should discuss ways in which the controls and practices relate to one another and, when taken as a whole, produce an integrated and consistent approach for preventing or controlling potential storm water contamination problems. The permit requirements included for the various industry sectors in Part XI

¹¹ In general, smoke tests should not be used for evaluating the discharge of non-storm water to a separate storm sewer as many sources of non-storm water typically pass through a trap that would limit the effectiveness of the smoke test.

of today's permit generally require that the portion of the plan that describes the measures and controls address the following minimum components.

When "minimize/reduce" is used relative to pollution prevention plan measures, EPA means to consider and implement best management practices that will result in an improvement over the baseline conditions as it relates to the levels of pollutants identified in storm water discharges with due consideration to economic feasibility and effectiveness.

a. Good Housekeeping. Good housekeeping involves using practical, cost-effective methods to identify ways to maintain a clean and orderly facility and keep contaminants out of separate storm sewers. It includes establishing protocols to reduce the possibility of mishandling chemicals or equipment and training employees in good housekeeping techniques. These protocols must be described in the plan and communicated to appropriate plant personnel.

b. Preventive Maintenance. Permittees must develop a preventive maintenance program that involves regular inspection and maintenance of storm water management devices and other equipment and systems. The program description should identify the devices, equipment, and systems that will be inspected; provide a schedule for inspections and tests; and address appropriate adjustment, cleaning, repair, or replacement of devices, equipment, and systems. For storm water management devices such as catch basins and oil/water separators, the preventive maintenance program should provide for periodic removal of debris to ensure that the devices are operating efficiently. For other equipment and systems, the program should reveal and enable the correction of conditions that could cause breakdowns or failures that may result in the release of pollutants.

c. Spill Prevention and Response Procedures. Based on an assessment of possible spill scenarios, permittees must specify appropriate material handling procedures, storage requirements, containment or diversion equipment, and spill cleanup procedures that will minimize the potential for spills and in the event of a spill enable proper and timely response. Areas and activities that typically pose a high risk for spills include loading and unloading areas, storage areas, process activities, and waste disposal activities. These activities and areas, and their accompanying drainage points, must be described in the plan. For a spill prevention and response program to be

effective, employees should clearly understand the proper procedures and requirements and have the equipment necessary to respond to spills.

d. Inspections. In addition to the comprehensive site evaluation, facilities are required to conduct periodic inspections of designated equipment and areas of the facility. Industry-specific requirements for such inspections, if any, are discussed in Section VIII. of this fact sheet. When required, qualified personnel must be identified to conduct inspections at appropriate intervals specified in the plan. A set of tracking or follow-up procedures must be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections must be maintained. These periodic inspections are different from the comprehensive site evaluation, even though the former may be incorporated into the latter. Equipment, area, or other inspections are typically visual and are normally conducted on a regular basis, e.g., daily inspections of loading areas. Requirements for such periodic inspections are specific to each industrial sector in today's permit, whereas the comprehensive site compliance evaluation is required of all industrial sectors. Area inspections help ensure that storm water pollution prevention measures (e.g., BMPs) are operating and properly maintained on a regular basis. The comprehensive site evaluation is intended to provide an overview of the entire facility's pollution prevention activities. Refer to Part VI.C.4. below for more information on the comprehensive site evaluation.

e. Employee Training. The pollution prevention plan must describe a program for informing personnel at all levels of responsibility of the components and goals of the storm water pollution prevention plan. The training program should address topics such as good housekeeping, materials management, and spill response procedures. Where appropriate, contractor personnel also must be trained in relevant aspects of storm water pollution prevention. A schedule for conducting training must be provided in the plan. Several sections in Part XI. of today's permit specify a minimum frequency for training of once per year. Others indicate that training is to be conducted at an appropriate interval. EPA recommends that facilities conduct training annually at a minimum. However, more frequent training may be necessary at facilities with high turnover of employees or where employee participation is essential to the storm water pollution prevention plan.

f. Recordkeeping and Internal Reporting Procedures. The pollution prevention plan must describe procedures for developing and retaining records on the status and effectiveness of plan implementation. At a minimum, records must address spills, monitoring, and inspection and maintenance activities. The plan also must describe a system that enables timely reporting of storm water management-related information to appropriate plant personnel.

g. Sediment and Erosion Control. The pollution prevention plan must identify areas that, due to topography, activities, soils, cover materials, or other factors have a high potential for significant soil erosion. The plan must identify measures that will be implemented to limit erosion in these areas.

h. Management of Runoff. The plan must contain a narrative evaluation of the appropriateness of traditional storm water management practices (i.e., practices other than those that control pollutant sources) that divert, infiltrate, reuse, or otherwise manage storm water runoff so as to reduce the discharge of pollutants. Appropriate measures may include, among others, vegetative swales, collection and reuse of storm water, inlet controls, snow management, infiltration devices, and wet detention/retention basins.

Based on the results of the evaluation, the plan must identify practices that the permittee determines are reasonable and appropriate for the facility. The plan also should describe the particular pollutant source area or activity to be controlled by each storm water management practice. Reasonable and appropriate practices must be implemented and maintained according to the provisions prescribed in the plan.

In selecting storm water management measures, it is important to consider the potential effects of each method on other water resources, such as ground water. Although storm water pollution prevention plans primarily focus on storm water management, facilities must also consider potential ground water pollution problems and take appropriate steps to avoid adversely impacting ground water quality. For example, if the water table is unusually high in an area, an infiltration pond may contaminate a ground water source unless special preventive measures are taken. Under EPA's July 1991 Ground Water Protection Strategy, States are encouraged to develop Comprehensive State Ground Water Protection Programs (CSGWPP). Efforts to control storm water should be compatible with State ground water objectives as reflected in CSGWPPs.

4. Comprehensive Site Compliance Evaluation

The permit requires that the storm water pollution prevention plan describe the scope and content of the comprehensive site evaluations that qualified personnel will conduct to (1) confirm the accuracy of the description of potential pollution sources contained in the plan, (2) determine the effectiveness of the plan, and (3) assess compliance with the terms and conditions of the permit. Note that the comprehensive site evaluations are not the same as periodic or other inspections described for certain industries under Part VI.C.3.d of this fact sheet. However, in the instances when frequencies of inspections and the comprehensive site compliance evaluation overlap they may be combined allowing for efficiency, as long as the requirements for both types of inspections are met. The plan must indicate the frequency of comprehensive evaluations which must be at least once a year, except where comprehensive site evaluations are shown in the plan to be impractical for inactive mining sites, due to remote location and inaccessibility.¹² The individual or individuals who will conduct the comprehensive site evaluation must be identified in the plan and should be members of the pollution prevention team. Material handling and storage areas and other potential sources of pollution must be visually inspected for evidence of actual or potential pollutant discharges to the drainage system. Inspectors also must observe erosion controls and structural storm water management devices to ensure that each is operating correctly. Equipment needed to implement the pollution prevention plan, such as that used during spill response activities, must be inspected to confirm that it is in proper working order.

The results of each comprehensive site evaluation must be documented in a report signed by an authorized company official. The report must describe the scope of the comprehensive site evaluation, the personnel making the comprehensive site evaluation, the date(s) of the comprehensive site evaluation, and any major observations relating to implementation of the storm water pollution prevention plan. Comprehensive site evaluation reports must be retained for at least 3 years after the date of the evaluation. Based on the

¹² Where annual site inspections are shown in the plan to be impractical for inactive mining sites, due to remote location and inaccessibility, site inspections must be conducted at least once every 3 years.

results of each comprehensive site evaluation, the description in the plan of potential pollution sources and measures and controls must be revised as appropriate within 2 weeks after each comprehensive site evaluation, unless indicated otherwise in Section XI of the permit. Changes in procedural operations must be implemented on the site in a timely manner for non-structural measures and controls not more than 12 weeks after completion of the comprehensive site evaluation. Procedural changes that require construction of structural measures and controls are allowed up to 3 years for implementation. In both instances, an extension may be requested from the Director.

D. Special Requirements

1. Special Requirements for Storm Water Discharges Associated With Industrial Activity Through Large and Medium Municipal Separate Storm Sewer Systems

Permittees that discharge storm water associated with industrial activity through large or medium municipal separate storm sewer systems¹³ are required to submit notification of the discharge to the operator of the municipal separate storm sewer system. A list of these systems is provided in Addendum D of today's notice.

Facilities covered by this permit must comply with applicable requirements in municipal storm water management permits developed under NPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the discharger has been notified of such conditions. In addition, permittees that discharge storm water associated with industrial activity through a large or medium municipal separate storm sewer system must make their pollution prevention plans available to the municipal operator of the system upon request by the municipal operator.

2. Special Requirements for Storm Water Discharges Associated With Industrial Activity From Facilities Subject to EPCRA Section 313 Requirements

Today's permit contains special requirements for certain permittees subject to reporting requirements under

¹³ Large and medium municipal separate storm sewer systems are systems located in an incorporated city with a population of 100,000 or more, or in a county identified as having a large or medium system (see 40 CFR 122.26(b) (4) and (7) and Appendices F through I to Part 122). A list of these municipalities is provided in Addendum D to today's notice.

Section 313 of the EPCRA (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA)). EPCRA Section 313 requires operators of certain facilities that manufacture (including import), process, or otherwise use listed toxic chemicals to report annually their releases of those chemicals to any environmental media. Listed toxic chemicals include more than 500 chemicals and chemical classes listed at 40 CFR Part 372 (including the recently added chemicals published November 30, 1994).

The criteria for facilities that must report under Section 313 are given at 40 CFR 372.22. A facility is subject to the annual reporting provisions of Section 313 if it meets all three of the following criteria for a calendar year: it is included in SIC codes 20 through 39; it has 10 or more full-time employees; and it manufactures (including imports), processes, or otherwise uses a chemical listed in 40 CFR 372.65 in amounts greater than the "threshold" quantities specified in 40 CFR 372.25.

There are more than 300 individually listed Section 313 chemicals, as well as 20 categories of Toxic Release Inventory (TRI) chemicals for which reporting is required. EPA has the authority to add to and delete from this list. The Agency has identified approximately 175 chemicals that it is classifying for the purposes of this general permit as "Section 313 water priority chemicals." For the purposes of this permit, Section 313 water priority chemicals are defined as chemicals or chemical categories that (1) are listed at 40 CFR 372.65 pursuant to EPCRA Section 313; (2) are manufactured, processed, or otherwise used at or above threshold levels at a facility subject to EPCRA Section 313 reporting requirements; and (3) meet at least one of the following criteria: (i) are listed in Appendix D of 40 CFR Part 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols), or Table V (certain toxic pollutants and hazardous substances); (ii) are listed as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR 116.4; or (iii) are pollutants for which EPA has published acute or chronic toxicity criteria. A list of the water priority chemicals is provided in Addendum F to today's notice. In today's permit, EPA is not extending the special requirements to facilities that store liquid chemicals in above-ground tanks or handle liquid chemicals in areas exposed to precipitation if such facilities are not subject to EPCRA Section 313 reporting requirements.

a. Summary of Special Requirements.

The special requirements in today's permit for facilities subject to reporting requirements under EPCRA Section 313 for a water priority chemical, except those that are handled and stored only in gaseous or non-soluble liquids or solids (at atmospheric pressure and temperature) forms (see Part VI.D.2.c below), state that storm water pollution prevention plans, in addition to the baseline requirements for plans, must contain special provisions addressing areas where Section 313 water priority chemicals are stored, processed, or otherwise handled. These requirements reflect the Best Available Technology for controlling discharges of water priority chemicals in storm water. The permit provides that appropriate containment, drainage control, and/or diversionary structures must be provided for such areas. An exemption from the special provisions for Section 313 facilities will be granted if the facility can certify in the pollution prevention plan that all water priority chemicals handled or used are gaseous or non-soluble liquids or solids (at atmospheric pressure and temperature). At a minimum, one of the following preventive systems or its equivalent must be used: curbing, culverting, gutters, sewers, or other forms of drainage control to prevent or minimize the potential for storm water runoff to come into contact with significant sources of pollutants; or roofs, covers, or other forms of appropriate protection to prevent storage piles from exposure to storm water and wind.

In addition, the permit establishes requirements for priority areas of the facility. Priority areas of the facility include the following: liquid storage areas where storm water comes into contact with any equipment, tank, container, or other vessel used for Section 313 water priority chemicals; material storage areas for Section 313 water priority chemicals other than liquids; truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals; and areas where Section 313 water priority chemicals are transferred, processed, or otherwise handled.

The permit provides that site runoff from other industrial areas of the facility that may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals must incorporate the necessary drainage or other control features to prevent the discharge of spilled or improperly disposed material and to ensure the mitigation of pollutants in runoff or leachate. The permit also establishes special requirements for preventive

maintenance and good housekeeping, facility security, and employee training.

In the proposed permit, EPA proposed to require facilities subject to EPCRA Section 313 requirements to have a Registered Professional Engineer (PE) certify their pollution prevention plans every 3 years. However, in response to commentors' concerns, EPA has revised the permit to eliminate the PE certification requirement. Instead, the permit now requires facilities subject to the special requirements to satisfy the pollution prevention plan signature requirements in Part IV.B.1. of the permit. EPA agrees with commentors that the operator is the most appropriate person to perform the certification. In addition, instead of certifying the plan every 3 years, facilities subject to EPCRA Section 313 requirements must amend the pollution prevention plan only when significant modifications are made to the facility, such as the addition of material handling areas or chemical storage units.

b. Requirements for Priority Areas.

The permit provides that drainage from priority areas should be restrained by valves or other positive means to prevent the discharge of a spill or other excessive leakage of Section 313 water priority chemicals. Where containment units are employed, such units may be emptied by pumps or ejectors; however, these must be manually activated. Flapper-type drain valves must not be used to drain containment areas, as these will not effectively control spills. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design. If facility drainage does not meet these requirements, the final discharge conveyance of all in-facility storm sewers must be equipped to be equivalent with a diversion system that could, in the event of an uncontrolled spill of Section 313 water priority chemicals, return the spilled material or contaminated storm water to the facility. Records must be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

Additional special requirements are related to the types of industrial activities that occur within the priority area. These requirements are summarized below:

(1) *Liquid Storage Areas.* Where storm water comes into contact with any equipment, tank, container, or other vessel used for Section 313 water priority chemicals, the material and construction of tanks or containers used for the storage of a Section 313 water priority chemical must be compatible with the material stored and conditions of storage, such as pressure and

temperature. Liquid storage areas for Section 313 water priority chemicals must be operated to minimize discharges of Section 313 chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include secondary containment provided for at least the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation, a strong spill contingency and integrity testing plan, and/or other equivalent measures. A strong spill contingency plan would typically contain, at a minimum, a description of response plans, personnel needs, and methods of mechanical containment (such as use of sorbents, booms, collection devices, etc.), steps to taken for removal of spill chemicals or materials, and procedures to ensure access to and availability of sorbents and other equipment. The testing component of the plan would provide for conducting integrity testing of storage tanks at set intervals such as once every 5 years, and conducting integrity and leak testing of valves and piping at a minimum frequency, such as once per year. In addition, a strong plan would include a written and actual commitment of manpower, equipment and materials required to comply with the permit and to expeditiously control and remove any quantity of spilled or leaked chemicals that may result in a toxic discharge.

(2) *Other Material Storage Areas.* Material storage areas for Section 313 water priority chemicals other than liquids that are subject to runoff, leaching, or wind must incorporate drainage or other control features to minimize the discharge of Section 313 water priority chemicals by reducing storm water contact with Section 313 water priority chemicals.

(3) *Truck and Rail Car Loading and Unloading Areas.* Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals must be operated to minimize discharges of Section 313 water priority chemicals. Appropriate measures to minimize discharges of Section 313 chemicals may include the placement and maintenance of drip pans (including the proper disposal of materials collected in the drip pans) where spillage may occur (such as hose connections, hose reels, and filler nozzles) when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

(4) *Other Transfer, Process, or Handling Areas.* Processing equipment and materials handling equipment must be operated to minimize discharges of Section 313 water priority chemicals.

Materials used in piping and equipment must be compatible with the substances handled. Drainage from process and materials handling areas must minimize storm water contact with Section 313 water priority chemicals. Additional protection such as covers or guards to prevent exposure to wind, spraying or releases from pressure relief vents to prevent a discharge of Section 313 water priority chemicals to the drainage system, and overhangs or door skirts to enclose trailer ends at truck loading/unloading docks must be provided as appropriate. Visual inspections or leak tests must be provided for overhead piping conveying Section 313 water priority chemicals without secondary containment.

c. Today's permit allows facilities to provide a certification, signed in accordance with Part VII.G. (signatory requirements) of this permit, that all Section 313 water priority chemicals handled and/or stored onsite are only in gaseous or non-soluble liquid or solid (at atmospheric pressure and temperature) forms in lieu of the additional requirements in Part VI.E.2 of today's permit. By allowing such a certification, EPA hopes to limit the application of the special requirements Part IV.E.2. of the permit to those facilities with 313 water priority chemicals that truly have the potential to contaminate storm water discharges associated with industrial activity.

3. Special Requirements for Storm Water Discharges Associated With Industrial Activity From Salt Storage Facilities

Today's general permit contains special requirements for storm water discharges associated with industrial activity from salt storage facilities. Storage piles of salt used for deicing or other commercial or industrial purposes

must be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. This requirement only applies to runoff from storage piles discharged to waters of the United States. Facilities that collect all of the runoff from their salt piles and reuse it in their processes or discharge it subject to a separate NPDES permit do not need to enclose or cover their piles. Permittees must comply with this requirement as expeditiously as practicable, but in no event later than 3 years from the date of permit issuance.

These special requirements have been included in today's permit based on human health and aquatic effects resulting from storm water runoff from salt storage piles compounded with the prevalence of salt storage piles across the United States.

4. Consistency With Other Plans

Storm water pollution prevention plans may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) plans developed for the facility under Section 311 of the CWA or Best Management Practices (BMP) Programs otherwise required by an NPDES permit for the facility as long as such requirement is incorporated into the storm water pollution prevention plan.

E. Monitoring and Reporting Requirements

The permit contains three general types of monitoring requirements: analytical monitoring or chemical monitoring; compliance monitoring for effluent guidelines compliance, and visual examinations of storm water discharges. This section provides a general description of each of these types of monitoring. Actual monitoring requirements for a given facility under the permit will vary depending upon

the industrial activities that occur at a facility and the criteria for determining monitoring used to develop the permit. Table 3 lists the sections of the permit and of this fact sheet that describe the monitoring requirements as they apply to the specific industrial activities eligible for coverage under the permit. These are minimum monitoring requirements and if a permittee so chooses, he may conduct additional sampling to acquire more data to improve the statistical validity of the results. Through increased analytical or visual monitoring the permittee may be able to better ascertain the effectiveness of their pollution prevention plan.

Analytical monitoring requirements involve laboratory chemical analyses of samples collected by the permittee. The results of the analytical monitoring are quantitative concentration values for different pollutants, which can be easily compared to the results from other sampling events, other facilities, or to National benchmarks. Section VI.E.1. describes the analytical monitoring requirements and the process and criteria by which an industry sector or subsector was selected for analytical monitoring. Compliance monitoring requirements are imposed under today's permit to insure that discharges subject to numerical effluent limitations under the storm water effluent limitations guidelines are in compliance with those limitations. The compliance monitoring requirements are explained in Section VI.E.2.

Visual examinations of storm water discharges are the least burdensome type of monitoring requirement under the permit. Almost all of the industrial activities are required to perform visual examinations of their storm water discharges when they are occurring on a quarterly basis. Visual examinations are described in Section VI.E.8.

TABLE 3.—STORM WATER MONITORING REQUIREMENTS

Industrial activity	Section of fact sheet describing monitoring requirements	Permit section describing monitoring requirements
Timber Products Facilities*	VIII.A.8	XI.A.5.
Paper and Allied Products Manufacturing Facilities*	VIII.B.7	XI.B.5.
Chemical and Allied Products Manufacturing Facilities*	VIII.C.8	XI.C.5.
Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers*	VIII.D.5	XI.D.5.
Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities*	VIII.E.7	XI.E.5.
Primary Metals Facilities*	VIII.F.7	XI.F.5.
Metal Mining (Ore Mining and Dressing) Facilities*	VIII.G.8	XI.G.5.
Coal Mines and Coal Mining-Related Facilities*	VIII.H.6	XI.H.5.
Oil and Gas Extraction Facilities*	VIII.I.7	XI.I.5.
Mineral Mining and Processing Facilities*	VIII.J.6	XI.J.5.
Hazardous Waste Treatment, Storage, or Disposal Facilities*	VIII.K.7	XI.K.5.
Landfills and Land Application Sites*	VIII.L.6	XI.L.5.

TABLE 3.—STORM WATER MONITORING REQUIREMENTS—Continued

Industrial activity	Section of fact sheet describing monitoring requirements	Permit section describing monitoring requirements
Automobile Salvage Yards*	VIII.M.6	XI.M.5.
Scrap and Waste Recycling Facilities*	VIII.N.6	XI.N.5.
Steam Electric Power Generating Facilities, Including Coal Handling Areas*	VIII.O.6	XI.O.5.
Vehicle Maintenance or Equipment Cleaning Areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, Rail Transportation Facilities, and the United States Postal Service Transportation Facilities.	VIII.P.6	XI.P.5.
Vehicle Maintenance Areas and/or Equipment Cleaning Operations at Water Transportation Facilities*	VIII.Q.6	XI.Q.5.
Ship and Boat Building or Repairing Yards	VIII.R.6	XI.R.5.
Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities*.	VIII.S.6	XI.S.5.
Treatment Works*	VIII.T.6	XI.T.5.
Food and Kindred Products Facilities*	VIII.U.5	XI.U.5.
Textile Mills, Apparel, and Other Fabric Product Manufacturing Facilities*	VIII.V.6	XI.V.5.
Wood and Metal Furniture and Fixture Manufacturing Facilities	VIII.W.5	XI.W.5.
Printing and Publishing Facilities	VIII.X.7	XI.X.5.
Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries*	VIII.Y.7	XI.Y.5.
Leather Tanning and Finishing Facilities	VIII.Z.7	XI.Z.5.
Fabricated Metal Products Industry*	VIII.AA.7	XI.AA.5.
Facilities That Manufacture Transportation Equipment, Industrial, or Commercial Machinery	VIII.AB.7	XI.AB.5.
Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods.	VIII.AC.7	XI.AC.5.

* Denotes a sector that contains analytical monitoring requirements for an entire sector or a subsector.

1. Analytical Monitoring Requirements.

Today's permit requires analytical monitoring for discharges from certain classes of industrial facilities. EPA believes that industries may reduce the level of pollutants in storm water runoff from their sites through the development and proper implementation of a storm water pollution prevention plan discussed in today's permit. Analytical monitoring is a means by which to measure the concentration of a pollutant in a storm water discharge. Analytical results are quantitative and therefore can be used to compare results from discharge to discharge and to quantify the improvement in storm water quality attributable to the storm water pollution prevention plan, or to identify a pollutant that is not being successfully controlled by the plan. EPA realizes there are greater cost burdens associated with analytical monitoring in comparison to visual examinations. Today's permit only requires analytical monitoring for the industry sectors or

subsectors that demonstrated a potential to discharge pollutants at concentrations of concern.

To determine the industry sectors and subsectors that would be subject to analytical monitoring requirements contained in the sections listed in Table 3, EPA reviewed the data submitted in the group application process. First, EPA divided the Part 1 and Part 2 application data by the industry sectors listed in Table 3. Where a sector was found to contain a wide range of industrial activities or potential pollutant sources, it was further subdivided into the industry subsectors listed in Table 4. Next, EPA reviewed the information submitted in Part 1 of the group applications regarding the industrial activities, significant materials exposed to storm water, and the material management measures employed. This information helped identify potential pollutants that may be present in the storm water discharges. Then, EPA entered into a database, the sampling data submitted in Part 2 of the group applications. That data was

arrayed according to industrial sector and subsector for the purposes of determining when analytical monitoring would be appropriate. Data received by EPA prior to January 1, 1993 (three months after the application deadline) were entered into EPA's database. Some additional data that was submitted even after January 1, 1993 was also entered into the database to bolster the data set for some sectors or subsectors (e.g., the auto salvage industry). All data submitted even later by group applicants which was not loaded into the database was reviewed by EPA during development of the permit. EPA notes that preliminary copies of the database were distributed to the public upon request in advance of a complete screening of the quality of the data set. These copies of the database contained a variety of errors that were screened and removed prior to EPA statistical analysis and evaluation of the results. The results of the statistical analyses are presented in the appropriate section of the fact sheet referenced in Table 3.

TABLE 4.—SECTOR/SUBSECTOR DIVISION OF GROUP APPLICANTS FOR ANALYSES OF SAMPLING DATA

Subsector	SIC code	Activity represented
Sector A. Timber Products		
1*	2421	General Sawmills and Planning Mills.
2	2491	Wood Preserving.
3*	2411	Log Storage and Handling.
4*	2426	Hardwood Dimension and Flooring Mills.

TABLE 4.—SECTOR/SUBSECTOR DIVISION OF GROUP APPLICANTS FOR ANALYSES OF SAMPLING DATA—Continued

Subsector	SIC code	Activity represented
	2429 243X 244X 245X 2493 2499	Special Product Sawmills, Not Elsewhere Classified. Millwork, Veneer, Plywood, and Structural Wood. Wood Containers. Wood Buildings and Mobile Homes. Reconstituted Wood Products. Wood Products, Not Elsewhere Classified.
Sector B. Paper and Allied Products Manufacturing		
1	261X	Pulp Mills.
2	262X	Paper Mills.
3*	263X	Paperboard Mills.
4	265X	Paperboard Containers and Boxes.
5	267X	Converted Paper and Paperboard Products, Except Containers and Boxes.
Sector C. Chemical and Allied Products Manufacturing.		
1*	281X	Industrial Inorganic Chemicals.
2*	282X	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass.
3	283X	Drugs.
4*	284X	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations.
5	285X	Paints, Varnishes, Lacquers, Enamels, and Allied Products.
6	286X	Industrial Organic Chemicals.
7*	287X	Agricultural Chemicals.
8	289X	Miscellaneous Chemical Products.
Sector D. Asphalt Paving and Roofing Materials Manufacturers and Lubricant Manufacturers		
1*	295X	Asphalt Paving and Roofing Materials.
2	299X	Miscellaneous Products of Petroleum and Coal.
Sector E. Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing		
1	321X 322X 323X	Flat Glass. Glass and Glassware, Pressed or Blown. Glass Products Made of Purchased Glass.
2	324X	Hydraulic Cement.
3*	325X 326X	Structural Clay Products. Pottery and Related Products.
4*	3297 327X 3295	Non-Clay Refractories. Concrete, Gypsum and Plaster Products. Minerals and Earth's, Ground, or Otherwise Treated.
Sector F. Primary Metals		
1*	331X	Steel Works, Blast Furnaces, and Rolling and Finishing Mills.
2*	332X	Iron and Steel Foundries.
3	333X	Primary Smelting and Refining of Nonferrous Metals.
4	334X	Secondary Smelting and Refining of Nonferrous Metals.
5*	335X	Rolling, Drawing, and Extruding of Nonferrous Metals.
6*	336X	Nonferrous Foundries (Castings).
7	339X	Miscellaneous Primary Metal Products.
Sector G. Metal Mining (Ore Mining and Dressing)		
1	101X	Iron Ores.
2*	102X	Copper Ores.
3	103X	Lead and Zinc Ores.
4	104X	Gold and Silver Ores.
5	106X	Ferroalloy Ores, Except Vanadium.
6	108X	Metal Mining Services.
7	109X	Miscellaneous Metal Ores.
Sector H. Coal Mines and Coal Mining-Related Facilities		
NA*	12XX	Coal Mines and Coal Mining-Related Facilities.

TABLE 4.—SECTOR/SUBSECTOR DIVISION OF GROUP APPLICANTS FOR ANALYSES OF SAMPLING DATA—Continued

Subsector	SIC code	Activity represented
Sector I. Oil and Gas Extraction		
1*	131X	Crude Petroleum and Natural Gas. Natural Gas Liquids. Oil and Gas Field Services.
2	132X	
3*	138X	
Sector J. Mineral Mining and Dressing		
1*	141X	Dimension Stone. Crushed and Broken Stone, Including Rip Rap. Nonmetallic Minerals, Except Fuels. Sand and Gravel. Clay, Ceramic, and Refractory Materials. Chemical and Fertilizer Mineral Mining.
	142X	
	148X	
2*	144X	
3	145X	
4	147X	
Sector K. Hazardous Waste Treatment Storage or Disposal Facilities		
NA*	NA	Hazardous Waste Treatment Storage or Disposal.
Sector L. Landfills and Land Application Sites		
NA*	NA	Landfills and Land Application Sites.
Sector M. Automobile Salvage Yards		
NA*	5015	Automobile Salvage Yards.
Sector N. Scrap Recycling Facilities		
NA*	5093	Scrap Recycling Facilities.
Sector O. Steam Electric Generating Facilities		
NA*	NA	Steam Electric Generating Facilities.
Sector P. Land Transportation		
1	40XX	Railroad Transportation. Local and Highway Passenger Transportation. Motor Freight Transportation and Warehousing. United States Postal Service. Petroleum Bulk Stations and Terminals.
2	41XX	
3	42XX	
4	43XX	
5	5171	
Sector Q. Water Transportation		
NA*	44XX	Water Transportation.
Sector R. Ship and Boat Building or Repairing Yards		
NA	373X	Ship and Boat Building or Repairing Yards.
Sector S. Air Transportation Facilities		
NA*	45XX	Air Transportation Facilities.
Sector T. Treatment Works		
NA*	NA	Treatment Works.
Sector U. Food and Kindred Products		
1	201X	Meat Products. Dairy Products. Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties. Grain Mill Products.
2	202X	
3	203X	
4*	204X	

TABLE 4.—SECTOR/SUBSECTOR DIVISION OF GROUP APPLICANTS FOR ANALYSES OF SAMPLING DATA—Continued

Subsector	SIC code	Activity represented
5	205X	Bakery Products.
6	206X	Sugar and Confectionery Products.
7*	207X	Fats and Oils.
8	208X	Beverages.
9	209X	Miscellaneous Food Preparations and Kindred Products.
Sector V. Textile Mills, Apparel, and Other Fabric Product Manufacturing		
1	22XX	Textile Mill Products.
2	23XX	Apparel and Other Finished Products Made From Fabrics and Similar Materials.
Sector W. Furniture and Fixtures		
NA	25XX 2434	Furniture and Fixtures. Wood Kitchen Cabinets.
Sector X. Printing and Publishing		
NA	27XX	Printing and Publishing.
Sector Y. Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries		
1*	301X	Tires and Inner Tubes.
	302X	Rubber and Plastics Footwear.
	305X	Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting.
	306X	Fabricated Rubber Products, Not Elsewhere Classified.
2	308X	Miscellaneous Plastics Products.
	393X	Musical Instruments.
	394X	Dolls, Toys, Games and Sporting and Athletic Goods.
	395X	Pens, Pencils, and Other Artists' Materials.
	396X	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal.
	399X	Miscellaneous Manufacturing Industries.
Sector Z. Leather Tanning and Finishing		
NA	311X	Leather Tanning and Finishing.
Sector AA. Fabricated Metal Products		
1*	342X	Cutlery, Handtools, and General Hardware.
	344X	Fabricated Structural Metal Products.
	345X	Screw Machine Products, and Bolts, Nuts, Screws, Rivets, and Washer.
	346X	Metal Forgings and Stampings.
	3471	Electroplating, Plating, Polishing, Anodizing, and Coloring.
	349X	Miscellaneous Fabricated Metal Products.
2*	391X	Jewelry, Silverware, and Plated Ware.
	3479	Coating, Engraving, and Allied Services.
Sector AB. Transportation Equipment, Industrial or Commercial Machinery		
NA	35XX	Industrial and Commercial Machinery.
Sector AC. Electronic, Electrical, Photographic and Optical Goods		
NA	36XX 38XX	Electronic, Electrical. Measuring, Analyzing and Controlling Instrument; Photographic and Optical Goods.

* Denotes subsector with analytical (chemical) monitoring requirements.

NA indicated those industry sectors in which subdivision into subsectors was determined to be not applicable.

To conduct a comparison of the results of the statistical analyses to determine when analytical monitoring would be required, EPA established "benchmark" concentrations for the

pollutant parameters on which monitoring results had been received. The "benchmarks" are the pollutant concentrations above which EPA determined represents a level of

concern. The level of concern is a concentration at which a storm water discharge could potentially impair, or contribute to impairing water quality or affect human health from ingestion of

water or fish. The benchmarks are also viewed by EPA as a level, that if below, a facility represents little potential for water quality concern. As such, the benchmarks also provide an appropriate level to determine whether a facility's storm water pollution prevention measures are successfully implemented. The benchmark concentrations are not effluent limitations and should not be interpreted or adopted as such. These values are merely levels which EPA has used to determine if a storm water discharge from any given facility merits further monitoring to insure that the facility has been successful in implementing a storm water pollution prevention plan. As such these levels represent a target concentration for a facility to achieve through implementation of pollution prevention measures at the facility. Table 5 lists the parameter benchmark values.

As can be seen in Table 5, benchmark concentrations were determined based upon a number of existing standards or other sources to represent a level above which water quality concerns could arise. EPA has also sought to develop values which can realistically be measured and achieved by industrial facilities. Moreover, storm water discharges with pollutant concentrations occurring below these levels would not warrant further analytical monitoring due to their de minimis potential effect on water quality.

The primary source of benchmark concentrations is EPA's National Water Quality Criteria, published in 1986 (often referred to as the "Gold Book"). For the majority of the benchmarks, EPA chose to use the acute aquatic life, fresh water ambient water quality criteria. These criteria represent maximum concentration values for a pollutant, above which, could cause acute effects on aquatic life such as mortality in a short period of time. Where acute criteria values were not available, EPA used the lowest observed effect level (LOEL) acute fresh water value. The LOEL values represent the lowest concentration of a pollutant that results in an adverse effect over a short period of time. These two acute freshwater values were selected as benchmark concentrations if the value was not below the approved method detection limit as listed in 40 CFR Part 136 and the value was not substantially above the concentration which EPA believes a facility can attain through the implementation of a storm water pollution prevention plan. These acute freshwater values best represent, on a national basis, the highest concentrations at which typical fresh

water species can survive exposures of pollutants for short durations (i.e., a storm discharge event).

Acute freshwater criteria do not exist for a number of parameters on which EPA received data. For these parameters, EPA selected benchmark values from several other references. The benchmark concentrations for five day biochemical oxygen demand (BOD₅) and for pH are determined based upon the secondary wastewater treatment regulations (40 CFR 133.102). EPA believes that the BOD₅ value of 30 mg/L is a reasonable concentration below which adverse effects in receiving waters under wet weather flow conditions should not occur. EPA also believes, that given group application data on BOD₅, this value should be readily achievable by industrial storm water dischargers. The benchmark value for pH is a range of 6.0–9.0 standard units. EPA believes this level, given the group application data, is reasonably achievable by industrial storm water dischargers and represents an acceptable range within which aquatic life impacts will not occur. The benchmark concentration for chemical oxygen demand (COD) is based upon the State of North Carolina benchmark values for storm water discharges, and is a factor of four times the BOD₅ benchmark concentration. EPA has concluded that COD is generally discharged in domestic wastewater at four times the concentration of BOD₅ without causing adverse impacts on aquatic life. EPA selected the median concentration from the National Urban Runoff Program as the benchmark for total suspended solids (TSS) and for nitrate plus nitrite as nitrogen. EPA believes the median concentration, which is the mid-point concentration (half the samples are above this level and half are below) represents concentration above which water quality concerns may result. For TSS a value of 100mg/L is similar to the storm water benchmark used by North Carolina for storm water permits, and given the group application data, should be readily achievable by industry with implementation of BMPs, many of which are designed for the purpose of controlling TSS. EPA also believes, given the group application data, that there is a relationship between TSS and the amount of exposed industrial activity and that industrial activities even in arid western States should be able to implement BMPs that will accomplish this benchmark. EPA selected the storm water effluent limitation guideline for petroleum refining facilities as the benchmark for

oil and grease. Given the lack of an acute criteria, EPA selected the chronic fresh water quality criteria as the benchmark for iron. Water quality criteria for waterbodies in the State of North Carolina were used to determine benchmarks for total phosphorus and for fluoride. The concentration value for phosphorus was designed to prevent eutrophication of fresh waterbodies from storm water runoff. The fluoride value was designed by North Carolina to be protective of water quality, as was the manganese value developed by Colorado. EPA believes that each of these benchmark values represent a reasonable level below which water quality impacts should not occur and they therefore represent a useful level to assess whether a pollution prevention plan is controlling pollution in storm water discharges.

For several other parameters, EPA chose a benchmark value base on a numerical adjustment of the acute fresh water quality criteria. Where the acute water quality criteria was below the method detection level for a pollutant, EPA used the "minimum level" (ML) as the benchmark concentration to ensure that the benchmark levels could be measured by permittees. For a few pollutants minimum levels have been published and these were used. For other pollutants, minimum levels need to be calculated. EPA calculated the minimum levels using the methodology described in the draft "National Guidance for the Permitting, Monitoring, and Enforcement of Water Quality-based Effluent Limitations Set Below Analytical Detection/Quantitation Levels" (Michael Cook, OWEC, March 18, 1994).

Additionally, several organic compounds (ethylbenzene, fluoranthene, toluene, and trichloroethylene) have acute fresh water quality criteria at substantially high concentrations, much higher than criteria developed for the protection of human health when ingesting water or fish. In addition, trichloroethylene is a human carcinogen. Therefore, EPA selected the human health criteria as benchmarks for these parameters. For dimethyl phthalate and total phenols, EPA selected benchmark concentrations based upon existing discharge limitations and compliance data (no industry had median concentrations above the selected benchmark for these parameters and therefore no industry sector is required to monitor for these two pollutants).

EPA conducted statistical analyses of the group Part 2 data for each parameter within every industry sector or subsector listed in Table 5. The

pollutants, benchmark values, and source of the benchmark values are indicated below in Table 5.

TABLE 5.—PARAMETER BENCHMARK VALUES

Parameter name	Benchmark level	Source
Biochemical Oxygen Demand(5)	30 mg/L	4
Chemical Oxygen Demand	120 mg/L	5
Total Suspended Solids	100 mg/L	7
Oil and Grease	15 mg/L	8
Nitrate + Nitrite Nitrogen	0.68 mg/L	7
Total Phosphorus	2.0 mg/L	6
pH	6.0–9.0 s.u.	4
Acrylonitrile (c)	7.55 mg/L	2
Aluminum, Total (pH 6.5–9)	0.75 mg/L	1
Ammonia	19 mg/L	1
Antimony, Total	0.636 mg/L	9
Arsenic, Total (c)	0.16854 mg/L	9
Benzene	0.01 mg/L	10
Beryllium, Total (c)	0.13 mg/L	2
Butylbenzyl Phthalate	3 mg/L	3
Cadmium, Total (H)	0.0159 mg/L	9
Chloride	860 mg/L	1
Copper, Total (H)	0.0636 mg/L	9
Dimethyl Phthalate	1.0 mg/L	11
Ethylbenzene	3.1 mg/L	3
Fluoranthene	0.042 mg/L	3
Fluoride	1.8 mg/L	6
Iron, Total	1.0 mg/L	12
Lead, Total (H)	0.0816 mg/L	1
Manganese	1.0 mg/L	13
Mercury, Total	0.0024 mg/L	1
Nickel, Total (H)	1.417 mg/L	1
PCB–1016 (c)	0.000127 mg/L	9
PCB–1221 (c)	0.10 mg/L	10
PCB–1232 (c)	0.000318 mg/L	9
PCB–1242 (c)	0.00020 mg/L	10
PCB–1248 (c)	0.002544 mg/L	9
PCB–1254 (c)	0.10 mg/L	10
PCB–1260 (c)	0.000477 mg/L	9
Phenols, Total	1.0 mg/L	11
Pyrene (PAH,c)	0.01 mg/L	10
Selenium, Total (*)	0.2385 mg/L	9
Silver, Total (H)	0.0318 mg/L	9
Toluene	10.0 mg/L	3
Trichloroethylene (c)	0.0027 mg/L	3
Zinc, Total (H)	0.065 mg/L	1

Sources:

1. "EPA Recommended Ambient Water Quality Criteria." Acute Aquatic Life Freshwater.
2. "EPA Recommended Ambient Water Quality Criteria." LOEL Acute Freshwater.
3. "EPA Recommended Ambient Water Quality Criteria." Human Health Criteria for Consumption of Water and Organisms.
4. Secondary Treatment Regulations (40 CFR 133).
5. Factor of 4 times BOD5 concentration—North Carolina benchmark.
6. North Carolina storm water benchmark derived from NC Water Quality Standards.
7. National Urban Runoff Program (NURP) median concentration.
8. Median concentration of Storm Water Effluent Limitation Guideline (40 CFR Part 419).
9. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18.
10. Laboratory derived Minimum Level (ML).
11. Discharge limitations and compliance data.
12. "EPA Recommended Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater.
13. Colorado—Chronic Aquatic Life Freshwater—Water Quality Criteria.

Notes:

(*) Limit established for oil and gas exploration and production facilities only.

(c) carcinogen.

(H) hardness dependent.

(PAH) Polynuclear Aromatic Hydrocarbon.

Assumptions:

Receiving water temperature—20 C.

Receiving water pH—7.8.

Receiving water hardness CaCO3 100 mg/L.

Receiving water salinity 20 g/kg.

Acute to Chronic Ratio (ACR)—10.

EPA prepared a statistical analysis of the sampling data for each pollutant parameter reported within each sector or subsector. (Only where EPA did not subdivide an industry sector into subsectors was an analysis of the entire

sector's data performed.) The statistical analysis was performed assuming a delta log normal distribution of the sampling data within each sector/subsector. The analyses calculated median, mean, maximum, minimum, 95th, and 99th percentile concentrations for each parameter. The results of the analyses may be found in the appropriate section of Part VIII of this Fact Sheet. From this analysis, EPA was able to identify pollutants for further evaluation within each sector or subsector.

EPA next compared the median concentration for each pollutant for each sector or subsector to the benchmark concentrations listed in Table 5. EPA also compared the other statistical results to the benchmarks to better ascertain the magnitude and range of the discharge concentrations to help identify the pollutants of concern. EPA did not conduct this analysis if a sector had data for a pollutant from less than three individual facilities. Under these circumstances, the sector or subsector would not have this pollutant identified as a pollutant of concern. This was done to ensure that a reasonable number of facilities represented the industry sector or subsector as a whole and that the analysis did not rely on data from only one facility.

For each industry sector or subsector, parameters with a median concentration higher than the benchmark level were considered pollutants of concern for the industry and identified as potential pollutants for analytical monitoring under today's permit. EPA then analyzed the list of potential pollutants to be monitored against the lists of significant materials exposed and industrial activities which occur within each industry sector or subsector as described in the part I application information. Where EPA could identify a source of a potential pollutant which is directly related to industrial activities of the industry sector or subsector, the permit identifies that parameter for analytical monitoring. If EPA could not identify a source of a potential pollutant which was associated with the sector/subsector's industrial activity, the permit does not require monitoring for the pollutant in that sector/subsector. Industries with no pollutants for which the median concentrations are higher than the benchmark levels are not required to perform analytical monitoring under this permit, with the exceptions explained below.

In addition to the sectors and subsectors identified for analytical monitoring using the methods described above, EPA determined, based upon a review of the degree of exposure, types

of materials exposed, special studies and in some cases inadequate sampling data in the group applications, that industries in the following sections of today's fact sheet also warrant analytical monitoring notwithstanding the absence of data on the presence or absence of certain pollutants in the group applications: VIII.K.7 (hazardous waste treatment storage and disposal facilities), and VIII.S.6 (airports which use more than 100,000 gallons per year of glycol-based fluids or 100 tons of urea for deicing). These industries are required to perform analytical monitoring under the permit due to the high potential for contamination of storm water discharge, which EPA believes was not adequately characterized by group applicants in the information they provided in the group application process.

All facilities within an industry sector or subsector identified for analytical monitoring must, at a minimum, monitor their storm water discharges during the second year of permit coverage, unless the facility exercises the Alternative Certification described in Section VI.E.3 of this fact sheet. At the end of the second year of permit coverage, a facility must calculate the average concentration for each parameter for which the facility is required to monitor. If the permittee collects more than four samples in this period, then they must calculate an average concentration for each pollutant of concern for all samples analyzed. Monitoring must be conducted for the same storm water discharge outfall in each sampling period. Where a given storm water discharge is addressed by more than one sector/subsector's monitoring requirements, then the monitoring requirements for the applicable sector's/subsector's activities are cumulative. Therefore, if a particular discharge fits under more than one set of monitoring requirements, the facility must comply with all sets of sampling requirements. Monitoring requirements must be evaluated on an outfall-by-outfall basis.

If the average concentration for a pollutant parameter is less than or equal to the benchmark value, then the permittee is not required to conduct analytical monitoring for that pollutant during the fourth year of the permit. If, however, the average concentration for a pollutant is greater than the benchmark value, then the permittee is required to conduct quarterly monitoring for that pollutant during the fourth year of permit coverage. Analytical monitoring is not required during the first, third, and fifth year of the permit. The exclusion from

analytical monitoring in the fourth year of the permit is conditional on the facility maintaining industrial operations and BMPs that will ensure a quality of storm water discharges consistent with the average concentrations recorded during the second year of the permit.

2. Compliance Monitoring

In addition to the analytical monitoring requirements for certain sectors, today's permit contains monitoring requirements for discharges which are subject to effluent limitations. These discharges must be sampled annually and tested for the parameters which are limited by the permit. Discharges subject to compliance monitoring include: coal pile runoff, contaminated runoff from phosphate fertilizer manufacturing facilities, runoff from asphalt paving and roofing emulsion production areas, material storage pile runoff from cement manufacturing facilities, and mine dewatering discharges from crushed stone, construction sand and gravel, and industrial sand mines located in Texas, Louisiana, Oklahoma, New Mexico, and Arizona. All samples are to be grabs taken within the first 30 minutes of discharge where practicable, but in no case later than the first hour of discharge. Where practicable, the samples shall be taken from the discharges subject to the numeric effluent limitations prior to mixing with other discharges.

Monitoring for these discharges is required to determine compliance with numeric effluent limitations. Furthermore, discharges covered under today's permit which are subject to numeric effluent limitations are not eligible for the alternative certification in Part VI.E.3. of this fact sheet.

3. Alternate Certification

Throughout today's permit, EPA has included monitoring requirements for facilities which the Agency believes have the potential for contributing significant levels of pollutants to storm water discharges. The alternative certification described below is included in the permit to ensure that monitoring requirements are only imposed on those facilities which do, in fact, have storm water discharges containing pollutants at concentrations of concern. EPA has determined that if there are no sources of a pollutant exposed to storm water at the site then the potential for that pollutant to contaminate storm water discharges does not warrant monitoring.

Therefore, a discharger is not subject to the analytical monitoring

requirements provided the discharger makes a certification for a given outfall, on a pollutant-by-pollutant basis, that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, significant materials from past industrial activity that are located in areas of the facility that are within the drainage area of the outfall are not presently exposed to storm water and will not be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan, and submitted to EPA in lieu of monitoring reports required under Part XI of the permit. The permittee is required to complete any and all sampling until the exposure is eliminated. If the facility is reporting for a partial year, the permittee must specify the date exposure was eliminated. If the permittee is certifying that a pollutant was present for part of the reporting period, nothing relieves the permittee from the responsibility to sample that parameter up until the exposure was eliminated and it was determined that no significant materials remained. This certification is not to be confused with the low concentration sampling waiver. The test for the application of this certification is whether the pollutant is exposed, or can be expected to be present in the storm water discharge. If the facility does not and has not used a parameter, or if exposure is eliminated and no significant materials remain, then the facility can exercise this certification.

The permit does not allow facilities with discharges subject to numeric effluent limitations to submit alternative certification in lieu of the compliance monitoring requirements in Sections VI.C., XI.C.6., XI.D.5., XI.E.5., and XI.J.5. The permit also does not allow air transportation facilities subject to the analytical monitoring requirements under Section XI.S.5. to exercise an alternative certification.

A facility is not precluded from exercising the alternative certification in lieu of analytical monitoring requirements in the fourth year of permit coverage, even if that facility failed to qualify for a low concentration waiver in year two. EPA encourages facilities to eliminate exposure of industrial activities and significant materials where practicable.

4. Reporting and Retention Requirements

Permittees are required to submit all analytical monitoring results obtained during the second and fourth year of

permit coverage within three months of the conclusion of the second and fourth year of coverage of the permit. For each outfall, one Discharge Monitoring Report Form must be submitted per storm event sampled. For facilities conducting monitoring beyond the minimum requirements an additional Discharge Monitoring Report Form must be filed for each analysis. The permittee must include a measurement or estimate of the total precipitation, volume of runoff, and peak flow rate of runoff for each storm event sampled. Permittees subject to compliance monitoring requirements are required to submit all compliance monitoring results annually on the 28th day of the month following the anniversary of the publication of this permit. Compliance monitoring results must be submitted on signed Discharge Monitoring Report Forms. For each outfall, one Discharge Monitoring Report form must be submitted for each storm event sampled.

Permittees are not required to submit records of the visual examinations of storm water discharges unless specifically asked to do so by the Director. Records of the visual examinations must be maintained at the facility. Records of visual examination of storm water discharge need not be lengthy. Permittees may prepare typed or hand written reports using forms or tables which they may develop for their facility. The report need only document: the date and time of the examination; the name of the individual making the examination; and any observations of color, odor, clarity, floating solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution.

The location for submittal of all reports is contained in the permit. Consistent with Office of Management and Budget Circular A-105, facilities located on the following Federal Indian Reservations, which cross EPA Regional boundaries, should note that permitting authority for such lands is consolidated in one single EPA Region.

a. Duck Valley Reservations lands, located in Regions IX and X, are handled by Region IX.

b. Fort McDermitt Reservation lands, located in Regions IX and X, are handled by Region IX.

c. Goshute Reservation lands, located in Regions VIII and IX, are handled by Region IX.

d. Navajo Reservation lands, located in Regions VI, VIII, and IX, are handled by Region IX.

e. Ute Mountain Reservation lands, located in Regions VI and VIII, are handled Region VIII (no areas in Region

VIII are receiving coverage under this permit).

Pursuant to the requirements of 40 CFR 122.41(j), today's permit requires permittees to retain all records for a minimum of 3 years from the date of the sampling, examination, or other activity that generated the data.

5. Sample Type

The discussion below is a general description of the sample type required for monitoring under today's permit. Certain industries have different requirements, however, so permittees should check the industry-specific requirements in Part XI. of today's permit to confirm these requirements. Grab samples may be used for all monitoring unless otherwise stated. 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. The required 72-hour storm event interval may be waived by the permittee where the preceding measurable storm event did not result in a measurable discharge from the facility. The 72-hour requirement may also be waived by the permittee where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample must be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger must submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. A minimum of one grab is required. Where the discharge to be sampled contains both storm water and non-storm water, the facility shall sample the storm water component of the discharge at a point upstream of the location where the non-storm water mixes with the storm water, if practicable.

6. Representative Discharge

The permit allows permittees to use the substantially identical outfalls to reduce their monitoring burden. This representative discharge provision provides facilities with multiple storm water outfalls, a means for reducing the number of outfalls that must be sampled and analyzed. This may result in a substantial reduction of the resources required for a facility to comply with analytical monitoring requirements. 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 test the effluent of one of such outfalls and report that the quantitative data also applies to the substantially identical outfalls provided that the permittee includes in the storm water pollution prevention plan a description of the location of the outfalls and explaining in detail why the outfalls are expected to discharge substantially identical effluent. 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. Facilities that select and sample a representative discharge are prohibited from changing the selected discharge in future monitoring periods unless the selected discharge ceases to be representative or is eliminated. Permittees do not need EPA approval to claim discharges are representative, provided they have documented their rationale within the storm water pollution prevention plan. However, the Director may determine the discharges are not representative and require sampling of all non-identical outfalls.

The representative discharge provision in the permit is available to almost all facilities subject to the analytical monitoring requirements (not including compliance monitoring for effluent guideline limit compliance purposes) and to facilities subject to visual examination requirements.

The representative discharge provisions described above are consistent with Section 5.2 of NPDES Storm Water Sampling Guidance Document (EPA 833-B-92-001, July 1992).

7. Sampling Waiver

a. Adverse Weather Conditions. The permit allows for temporary waivers from sampling based on adverse climatic conditions. This temporary sampling waiver is only intended to apply to insurmountable weather conditions such as drought or dangerous conditions such as lightning, flash flooding, or hurricanes. These events tend to be isolated incidents and should not be used as an excuse for not conducting sampling under more favorable conditions associated with other storm events. The sampling

waiver is not intended to apply to difficult logistical conditions, such as remote facilities with few employees or discharge locations which are difficult to access. When a discharger is unable to collect samples within a specified sampling period due to adverse climatic conditions, the discharger shall collect a substitute sample from a separate qualifying event in the next sampling period as well as a sample for the routine monitoring required in that period. Both samples should be analyzed separately and the results of that analysis submitted to EPA.

Permittees are not required to obtain advance approval for sampling waivers.

b. Unstaffed and Inactive Sites—Chemical Waiver. The permit allows for a waiver from sampling for facilities that are both inactive and unstaffed. This waiver is only intended to apply to these types of facilities when the ability to conduct sampling would be severely hindered and result in the inability to meet the time and representative rainfall sampling specifications. This sampling waiver is not intended to apply to remote facilities that are active and staffed, or typical difficult logistical conditions. When a discharger is unable to collect samples as specified in this permit, the discharger shall certify to the Director in the DMR that the facility is unstaffed and inactive and the ability to conduct samples within the specifications is not possible. Permittees are not required to obtain advance approval for this waiver.

c. Unstaffed and Inactive Sites—Visual Waiver. The permit allows for a waiver from sampling for facilities that are both inactive and unstaffed. This waiver is only intended to apply to these types of facilities when the ability to conduct visual examinations would be severely hindered and result in the inability to meet the time and representative rainfall sampling specifications. This sampling waiver is not intended to apply to remote facilities that are active and staffed, or typical difficult logistical conditions. When a discharger is unable to perform visual examinations as specified in this permit, the discharger shall maintain on site with the pollution prevention plan a certification stating that the facility is unstaffed and inactive and the ability to perform visual examinations within the specifications is not possible. Permittees are not required to obtain advance approval for visual examination waivers.

8. Quarterly Visual Examination of Storm Water Quality

In order to provide a tool for evaluating the effectiveness of the

pollution prevention plan, the permit requires the majority of industries covered under today's permit to perform quarterly visual examinations of storm water discharges. EPA believes these visual examinations will assist with the evaluation of the pollution prevention plan. This section provides a general description of the monitoring and reporting requirements under today's permit. The visual examination provides a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Most facilities covered under today's permit are required to conduct a quarterly visual examination of storm water discharges associated with industrial activity from each outfall, except discharges exempted under the representative discharge provision. The visual examination of storm water outfalls should include any observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other obvious indicators of storm water pollution. No analytical tests are required to be performed on these samples.

The examination of the sample must be made in well lit areas. The visual examination is not required if there is insufficient rainfall or snow-melt to runoff or if hazardous conditions prevent sampling. Whenever practicable the same individual should carry out the collection and examination of discharges throughout the life of the permit to ensure the greatest degree of consistency possible in recording observations. Grab samples for the examination shall be collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff begins discharging. Reports of the visual examination include: the examination date and time, examination personnel, visual quality of the storm water discharge, and probable sources of any observed storm water contamination. The visual examination reports must be maintained on site with the pollution prevention plan.

When conducting a storm water visual examination, the pollution prevention team, or team member, should attempt to relate the results of the examination to potential sources of storm water contamination on the site. For example, if the visual examination reveals an oil sheen, the facility personnel (preferably members of the pollution prevention team) should conduct an inspection of the area of the site draining to the examined discharge to look for obvious sources of spilled oil, leaks, etc. If a source can be located, then this information allows the facility

operator to immediately conduct a clean-up of the pollutant source, and/or to design a change to the pollution prevention plan to eliminate or minimize the contaminant source from occurring in the future.

To be most effective, the personnel conducting the visual examination should be fully knowledgeable about the storm water pollution prevention plan, the sources of contaminants on the site, the industrial activities conducted exposed to storm water and the day to day operations that may cause unexpected pollutant releases.

Other examples include; if the visual examination results in an observation of floating solids, the personnel should carefully examine the solids to see if they are raw materials, waste materials or other known products stored or used at the site. If an unusual color or odor is sensed, the personnel should attempt to compare the color or odor to the colors or odors of known chemicals and other materials used at the facility. If the examination reveals a large amount of settled solids, the personnel may check for unpaved, unstabilized areas or areas of erosion. If the examination results in a cloudy sample that is very slow to settle-out, the personnel should evaluate the site draining to the discharge point for fine particulate material, such as dust, ash, or other pulverized, ground, or powdered chemicals.

If the visual examination results in a clean and clear sample of the storm water discharge, this may indicate that no visible pollutants are present. This would be a indication of a high quality result, however, the visual examination will not provide information about dissolved contamination. If the facility is in a sector or subsector required to conduct analytical (chemical) monitoring, the results of the chemical monitoring, if conducted on the same sample, would help to identify the presence of any dissolved pollutants and the ultimate effectiveness of the pollution prevention plan. If the facility

is not required to conduct analytical monitoring, it may do so if it chooses to confirm the cleanliness of the sample.

While conducting the visual examinations, personnel should constantly be attempting to relate any contamination that is observed in the samples to the sources of pollutants on site. When contamination is observed, the personnel should be evaluating whether or not additional BMPs should be implemented in the pollution prevention plan to address the observed contaminant, and if BMPs have already been implemented, evaluating whether or not these are working correctly or need maintenance. Permittees may also conduct more frequent visual examinations than the minimum quarterly requirement, if they so choose. By doing so, they may improve their ability to ascertain the effectiveness of their plan. Using this guidance, and employing a strong knowledge of the facility operations, EPA believes that permittees should be able to maximize the effectiveness of their storm water pollution prevention efforts through conducting visual examinations which give direct, frequent feedback to the facility operator or pollution prevention team on the quality of the storm water discharge.

EPA believes that this quick and simple assessment will help the permittee to determine 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. EPA recommends that the visual examination be conducted at different times than the chemical monitoring, but is not requiring this. In addition, more frequent visual examinations can be conducted if the permittee so chooses. In this way, better assessments of the effectiveness of the pollution prevention plan can be achieved. 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 site's storm water problems and the effects of the management practices that are included in the plan.

9. SARA Title III, Section 313 Facilities

Today's permit does not contain special monitoring requirements for facilities subject to the Toxic Release Inventory (TRI) reporting requirements under Section 313 of the EPCRA. EPA has reviewed data submitted by facilities in the group application and determined that storm water monitoring requirements are more appropriately based upon the industrial activity or significant material exposed than upon a facility's status as a TRI reporter under Section 313 of EPCRA. This determination is based upon a comparison of the data submitted by TRI facilities included in the group application process to data from group application sampling facilities that were not found on the TRI list. Table 6 summarizes the data comparison. The data indicate that there are no consistent differences in the level of water priority chemicals present in samples from TRI facilities when compared to the samples from facilities not subject to TRI reporting requirements.

EPA has included a revised Appendix A that lists 44 additional water priority chemicals that meet the definition of a section 313 water priority chemical or chemical categories requirements as defined by EPA in the permit under Part X, Definitions.

TABLE 6.—COMPARISON OF POLLUTANT CONCENTRATION IN GRAB SAMPLES

Pollutant	Non-TRI facility median concentration (mg/L)	TRI facility median concentration (mg/L)	Non-TRI facility mean concentration (mg/L)	TRI facility mean concentration (mg/L)	Non-TRI facility 95th percentile concentration (mg/L)	TRI facility 95th percentile concentration (mg/L)
Acrylonitrile	0.100	0.000	0.085	0.000	0.100	0.000
Aluminum	0.922	0.819	12.061	28.893	58.000	12.000
Ammonia	0.640	0.000	10.507	23.231	9.500	17.200
Antimony	0.000	0.000	0.603	0.014	2.096	0.078
Arsenic	0.000	0.000	0.231	0.008	0.170	0.033
Benzene	0.000	0.000	0.001	0.000	0.001	0.000
Beryllium	0.001	0.000	0.002	0.080	0.007	0.400
Butylbenzyl phthalate	0.000	0.000	0.007	0.000	0.018	0.000
Cadmium	0.000	0.000	0.014	0.030	0.050	0.028
Chlorine	0.000	0.000	1.590	0.052	11.000	0.300

TABLE 6.—COMPARISON OF POLLUTANT CONCENTRATION IN GRAB SAMPLES—Continued

Pollutant	Non-TRI facility median concentration (mg/L)	TRI facility median concentration (mg/L)	Non-TRI facility mean concentration (mg/L)	TRI facility mean concentration (mg/L)	Non-TRI facility 95th percentile concentration (mg/L)	TRI facility 95th percentile concentration (mg/L)
Chloroform	0.000	0.000	0.083	0.001	0.022	0.006
Chromium	0.006	0.000	1.236	0.109	0.250	0.270
Copper	0.047	0.028	1.430	0.344	2.200	1.300
Cyanide	0.000	0.000	0.021	0.007	0.008	0.020
Di-n-butyl phthalate	0.000	0.000	0.005	0.168	0.014	1.595
Dimethyl phthalate	0.000	0.000	0.005	0.000	0.016	0.000
Ethylbenzene	0.000	0.000	0.000	0.000	0.001	0.005
Hexavalent chromium	0.000	0.000	0.001	0.003	0.002	0.011
Lead	0.020	0.006	0.556	0.480	1.900	1.100
Manganese	0.150	0.090	2.015	0.273	9.550	1.244
Mercury	0.000	0.000	0.530	0.006	0.001	0.005
Naphthalene	0.000	0.000	2.998	0.001	24.000	0.013
Nickel	0.020	0.000	0.087	0.311	0.390	0.458
Phenols	0.000	0.000	0.063	0.019	0.100	0.075
Selenium	0.000	0.000	0.262	0.000	0.020	0.001
Silver	0.000	0.000	0.034	0.001	0.006	0.010
Toluene	0.000	0.000	0.052	0.011	0.037	0.009
Trichloroethylene	0.000	0.000	0.004	0.040	0.001	0.030
1,1,1-Trichloroethane	0.000	0.000	0.004	0.460	0.015	6.000
Xylene	0.000	0.000	0.000	0.004	0.003	0.037
Zinc	0.320	0.250	3.761	1.720	8.800	5.140

F. Numeric Effluent Limitations

1. Industry-specific Limitations

Part XI. of today's permit contains numeric effluent limitations for phosphate fertilizer manufacturing facilities, asphalt emulsion manufacturers, cement manufacturers, coal pile runoff from steam electric power generating facilities, and sand, gravel, and crushed stone quarries. These limitations are required under EPA's storm water effluent limitation guidelines in the Code of Federal Regulations at 40 CFR Part 418, Part 443, Part 411, Part 423, and Part 436. Parts VIII.C.6., VIII.D.5., VIII.E.6., and VIII.J.5. of this fact sheet discuss these limitations.

2. Coal Pile Runoff

Today's permit establishes effluent limitations of 50 mg/L total suspended solids and a pH range of 6.0–9.0 for coal pile runoff. Any untreated overflow from facilities designed, constructed, and operated to treat the volume of coal pile runoff associated with a 10-year, 24-hour rainfall event is not subject to the 50 mg/L limitation for total suspended solids. Steam electric generating facilities must comply with these limitations upon submittal of the NOI. EPA has adopted these technology-based pH limitations in today's general permit in accordance with setting limits on a case-by-case basis as allowed under 40 CFR 125.3 and Section 402 of the Clean Water Act. These case-by-case limits are derived by transferring the

known achievable technology from an effluent guideline to a similar type of discharge. When developing these technology-based limitations, variables such as rainfall pH, sizes of coal piles, pollutant characteristics, and runoff volume were considered. Therefore, these variables need not be considered again. As discussed above, these pH limitations are technology-based and are not based on water quality. All other types of facilities must comply with this requirement as expeditiously as practicable, but in no event later than 3 years from the date of permit issuance.

The pollutants in coal pile runoff can be classified into specific types according to chemical characteristics. Each type relates to the pH of the coal pile drainage. The pH tends to be of an acidic nature, primarily as a result of the oxidation of iron sulfide in the presence of oxygen and water. The potential influence of pH on the ability of toxic and heavy metals to leach from coal piles is of particular concern. Many of the metals are amphoteric with regard to their solubility behavior. These factors affect acidity, pH, and the subsequent leaching of trace metals: concentration and form of pyritic sulfur in coal; size of the coal pile; method of coal preparation and clearing prior to storage; climatic conditions, including rainfall and temperature; concentrations of calcium carbonate and other neutralizing substances in the coal; concentration and form of trace metals in the coal; and the residence time of water in the coal pile.

Coal piles can generate runoff with low pH values, with the acid values being quite variable. The suspended solids levels can be significant, with levels of 2,500 mg/L not uncommon. Metals present in the greatest concentrations are copper, iron, aluminum, nickel, and zinc. Others present in trace amounts include chromium, cadmium, mercury, arsenic, selenium, and beryllium¹⁴.

G. Regional Offices

1. Notice of Intent Address

Notices of Intent to be authorized to discharge under this permit should be sent to: NOI/NOT Processing Center (4203), 401 M Street, S.W., Washington, DC 20460.

2. Address for Other Submittals

Other submittals of information required under this permit or individual permit applications should be sent to the appropriate EPA Regional Office:

a. *ME, MA, NH, Federal Indian Reservations in CT, MA, NH, ME, RI, and Federal Facilities in VT*
EPA, Region I, Water Management Division, (WCP), Storm Water Staff, JFK Federal Building, Boston, MA 02203

b. *PR and Federal Facilities in PR*

¹⁴ A more complete description of pollutants in coal pile runoff is provided in the "Final Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category," (EPA-440/1-82/029), EPA, November 1982.

EPA, Region II, Water Management Division, (2WM-WPC), Storm Water Staff, 290 Broadway, New York, NY 10007-1866

c. DC and Federal Facilities in DC and DE

EPA, Region III, Water Management Division, (3WM55), Storm Water Staff, 841 Chestnut Building, Philadelphia, PA 19107

d. FL

EPA, Region IV, Water Management Division, Permits Section (WPEB-7), 345 Courtland Street, NE, Atlanta, GA 30365

e. LA, NM, OK, and TX and Federal Indian Reservations in LA, NM (Except Navajo and Ute Mountain Reservation Lands), OK, and TX

EPA, Region VI, Water Management Division, (6W-EA), EPA SW MSGP, P.O. Box 50625, Dallas, TX 75202

f. AZ, Johnston Atoll, Midway Island, Wake Island, all Federal Indian Reservations in AZ, CA, and NV; those portions of the Duck Valley, Fort McDermitt, and Goshute Reservations that are outside NV; those portions of the Navajo Reservation that are outside AZ; and Federal facilities in AZ, Johnston Atoll, Midway Island, and Wake Island.

EPA, Region IX, Water Management Division, (W-5-3), Storm Water Staff, 75 Hawthorne Street, San Francisco, CA 94105

g. ID, OR, and WA; Federal Indian Reservations in AK, ID (except the Duck Valley Reservation), OR (except the Fort McDermitt Reservation), and WA; and Federal facilities in ID, and WA

EPA, Region X, Water Division, (WD-134), Storm Water Staff, 1200 Sixth Avenue, Seattle, WA 98101

H. Compliance Deadlines

For most permittees, today's permit imposes a deadline of 270 days following date of publication of this permit for development of pollution prevention plans and for compliance with the terms of the plan.

Today's general permit provides additional time if constructing structural best management practices is called for in the plan. The portions of a plan addressing these BMP construction requirements must provide for compliance with the plan as soon as practicable, but in no case later than 3 years from the effective date of the permit. However, storm water pollution

prevention plans for facilities subject to these additional requirements must be prepared within 270 days of the date of publication of this permit and provide for compliance with the baseline terms and conditions of the permit (other than the numeric effluent limitation) as expeditiously as practicable, but in no case later than 270 days after the publication date of this permit.

Facilities are not required to submit the pollution prevention plans for review unless they are requested by EPA or by the operator of a large or medium municipal separate storm sewer system. When a plan is reviewed by EPA, the Director can require the permittee to amend the plan if it does not meet the minimum permit requirements.

VII. Cost Estimates for Common Permit Requirements

The conditions of today's general permit reflects the baseline permit requirements established in EPA's NPDES permits for Storm Water Discharges Associated With Industrial Activity (57 FR 41175 and 57 FR 44412). The requirements found under today's permit are more specific to the conditions found in the industries. EPA does not consider these requirements to be more costly than the pollution prevention plan requirements established in the baseline general permit. The following section contains the estimates of the cost of compliance with the baseline permit requirements.

A. Pollution Prevention Plan Implementation

Storm water pollution prevention plans for the majority of facilities will include relatively low cost baseline controls. EPA's analysis of storm water pollution prevention plans indicates that the cost of developing and implementing these plans is variable and will depend on a number of the following factors: the size of the facility, the type and amount of significant materials stored or used at a facility, the nature of the plant operations, the plant designs (e.g., the processes used and layout of a plan), and the extent to which housekeeping measures are already employed. Table 7 provides estimates of the range of costs for preparing and implementing the common requirements for a storm water pollution prevention plan. It is expected that the low cost estimates provided in Table 7 are appropriate for the majority of smaller facilities. The high cost

estimates in Table 7 are more applicable to larger, more complex facilities with more potential sources of pollutants. Please note that the costs in this table exclude special requirements, such as EPCRA 313 requirements. EPA estimated the cost of preparing a storm water pollution prevention plan for a hypothetical small business in the automobile salvage yard industry. Based on experience and best professional judgment, EPA estimates that a typical small automobile salvage yard would face a one-time cost of about \$874. This cost is lower than the low end of the cost estimate provided in Table 7 because it is based on a particular (though hypothetical) small business. Table 7 estimates are based on what EPA expects are appropriate for the majority of small facilities. Some facilities are likely to face lower costs, such as the hypothetical small automobile junk yard, and other facilities are likely to face higher costs.

The cost of compliance, monitoring and preparing the PPP for the multi-sector permit are not high when compared to the site-specific requirements to comply with an individual permit. The Clean Water Act does not give EPA the authority to exempt permitted facilities from requirements designed to improve the quality of the nation's waters. The economic ability of small businesses to comply with this permit can be a factor to consider if water quality concerns are not applicable to the surface water body receiving the storm water discharge.

The operators of regulated storm water discharges have to consider the economic effects of coverage under the multi-sector permit, the baseline general permit, or an individual NPDES permit. Coverage under either of the two general permits is not required by EPA. The NPDES regulations give EPA the authority to require coverage under an individual NPDES permit, not general permits. A facility's decision to be covered under a general permit is voluntary. Individual permits can require numerical limits and more frequent monitoring and reporting, along with the development and implementation of SWPPPs. The burden of developing an SWPPP is controlled by the facility's ability to achieve the permits goal: reduce or eliminate the discharge of pollutants to the nation's waters.

TABLE 7.—SUMMARY OF ESTIMATED RANGES OF COSTS FOR COMPLIANCE WITH STORM WATER POLLUTION PREVENTION PLANS WITH BASELINE REQUIREMENTS

	Low costs		High costs	
	First year costs	Annual costs	First year costs	Annual costs
Submittal of NOI	\$14	.....	\$14	.....
Notification of Municipality	14	.....	14	.....
Plan Preparation	1,518	.....	76,153	.....
Plan Implementation	90	294	35,400	9,371
Comprehensive Site Compliance Evaluation/Plan Revision .....	.....	267	.....	8,875
Reportable Quantities	(1) No Costs	.....	8,501	.....
Total	1,636	561	120,082	18,246

This table identifies estimated low and high costs (in 1992 dollars) to develop and implement storm water pollution prevention plans.

Low costs of implementing program components are zero where existing programs or procedures is assumed adequate.

The estimated costs for plan preparation and plan revisions includes costs of preparing/revising plan to address baseline requirements. However, the costs of implementing special requirements, such as those for EPCRA Section 313 facilities coal piles and salt piles are not otherwise addressed in this table.

B. Cost Estimates for EPCRA Section 313

Table 8 provides estimates of the range of costs of preparing and implementing a storm water pollution prevention plan for facilities subject to

the special requirements for facilities subject to EPCRA Section 313 reporting requirements for chemicals classified as "Section 313 water priority chemicals." EPA expects the majority of facilities to have existing containment systems that meet the majority of the requirements of

this permit. High cost estimates correspond to facilities that are expected to be required to undertake some actions to upgrade existing containment systems to meet the requirements of this permit.

TABLE 8.—SUMMARY OF ESTIMATED ADDITIONAL COSTS FOR COMPLIANCE WITH STORM WATER POLLUTION PREVENTION PLANS FOR FACILITIES SUBJECT TO SECTION 313 OF EPCRA FOR WATER PRIORITY CHEMICALS

	Low costs		High costs	
	Costs during first 3 years	Annual costs	Costs during first 3 years	Annual costs
Plan Preparation	\$630	.....	0	.....
Liquid Storage Areas	\$11,200	.....
Material Storage Areas	560	.....
Loading Areas	21,000	.....
Process Areas	11,190	.....
Drainage/Runoff	7,750	.....
Housekeeping/Maintenance	\$5,957
Facility Security	3,240	.....
Employee Training	1,403
Toxicity Reduction	3,046
Totals	630	\$0	54,940	10,406

This table identifies estimated additional low and high costs to develop and implement storm water pollution prevention plans for EPCRA Section 313 facilities subject to special conditions.

Low costs of implementing program components are zero where existing programs, procedures or security is assumed adequate.

The high costs for preparing pollution prevention plans to include EPCRA Section 313 additional requirement were addressed as part of the estimated high costs for preparation of baseline pollution prevention plans (see Table 7).

C. Cost Estimates for Coal Piles

The effluent limitations for coal pile runoff in the permit can be achieved by these two primary methods: limiting exposure to coal by use of covers or tarpaulins and collecting and treating the runoff. In some cases, coal pile runoff may be in compliance with the effluent limitations without covering of the pile or collection or treatment of the runoff. In these cases, the operator of the discharge would not have a control cost.

The use of covers or tarpaulins to prevent or minimize exposure of the coal pile to storm water is generally expected to be practical only for relatively small piles. Coal pile covers or tarpaulins are anticipated to have a fixed cost of \$400 and annual cost of \$160.

Table 9 provides estimates of the costs of treating coal pile runoff.¹⁵ These costs

¹⁵ The type and degree of treatment required to meet the effluent limitations of this permit vary depending on factors such as the amount of sulfur

are based on a consideration of a treatment train requiring equalization, pH adjustment, and settling, including the costs for impoundment (for equalization), a lime feed system and mixing tanks for pH adjustment, and a clarifier for settling. The costs for the

in the coal. This section describes a model treatment scheme for estimating costs for compliance with the effluent limitations. Dischargers may implement other less expensive treatment approaches to enable them to discharge in accordance with these limits where appropriate.

impoundment area include diking and containment around each coal pile and associated sumps and pumps and piping from runoff areas to the impoundment area. The costs for land are not included. The lime feed system employed for pH adjustment includes a storage silo, shaker, feeder, and lime slurry storage tank, instrumentation, electrical connections, piping, and controls.

Additional costs may be incurred if a polymer system is needed. In this case, costs would include impoundment for equalization, a lime feed system, mixing tank, and polymer feed system for chemical precipitation, a clarifier for settling, and an acid feeder and mixing

tank to readjust the pH within the range of 6 to 9. The equipment and system design, with the exception of the polymer feeder, acid feeder, and final mixing tank, are essentially the same as shown in Table 9. Two tanks are required for a treatment train with a polymer system, one for precipitation and another for final pH adjustment with acid. The cost of mixing is therefore twice that shown in Table 9. The polymer feed system includes storage hoppers, chemical feeder, solution tanks, solution pumps, interconnecting piping, electrical connections, and instrumentation. The costs of clarification are identical to that

of Table 9. A treatment train with a polymer system requires the use of an acid addition system to readjust the pH within the range of 6 to 9. The components of this system include a lined acid storage tank, two feed pumps, an acid pH control loop, and associated piping, electrical connections, and instrumentation.

Additional information regarding the cost of these technologies can be found in "Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category," (EPA-440/182/029), November 1982, EPA.

TABLE 9.—SUMMARY OF ESTIMATED COSTS FOR TREATMENT OF COAL PILE RUNOFF

	30,000 cubic meter coal pile	120,000 cubic meter coal pile
IMPOUNDMENT:		
Installed Capital Cost	6,850	6,850
Operation and Maintenance (\$/year)	Negligible	Negligible
LIME FEED SYSTEM:		
Installed Capital Cost (\$)	138,800	255,700
Operation and Maintenance (\$/year)	5,780	10,655
Energy Requirements (kwh/yr)	3.6×10**4	3.6×10**4
Land Requirements (ft**2)	5,000	5,000
MIXING EQUIPMENT:		
Installed Capital Cost (\$)	65,750	91,320
Operation and Maintenance (\$/year)	2,280	2,430
Energy Requirements (kwh/yr)	1.3×10**3	3.3×10**3
Land Requirements (ft**2)	2,000	2,000
CLARIFICATION:		
Installed Capital Cost (\$)	182,650	237,450
Operation and Maintenance (\$/year)	3,200	3,650
Energy Requirements (kwh/yr)	1.3×10**3	3.3×10**3
Land Requirements (acres)	0.1	0.1

Source: "Development Document for Effluent Limitations Guidelines and Standards and Pretreatment Standards for the Steam Electric Point Source Category" (EPA-440/182/029), November 1982, EPA. Costs estimates are in 1992 dollars.

D. Cost Estimates for Salt Piles

Salt pile covers or tarpaulins are anticipated to have a fixed cost of \$400 and an annual cost of \$160 for medium-sized piles and a fixed cost of \$4,000 and an annual cost of \$2,000 for very large piles. Structures such as salt domes are generally expected to have a fixed cost of between \$30,000 for small piles (\$70 to \$80 per cubic yard) and \$100,000 for larger piles (\$18 per cubic yard) with costs depending on size and other construction parameters.

VIII. Special Requirements for Discharges Associated With Specific Industrial Activities

The industry-specific requirements allow the implementation of site-specific measures that address features, activities, or priorities for control associated with the identified storm water discharges. This framework provides the necessary flexibility to

address the variable risk for pollutants in storm water discharges associated with the different types of industrial activity addressed by this permit. This approach also assures that facilities have the opportunity to identify procedures to prevent storm water pollution at a particular site that are appropriate, given processes employed, engineering aspects, functions, costs of controls, location, and age of the facility (as contemplated by 40 CFR 125.3). The approach taken also allows the flexibility to establish controls that can appropriately address different sources of pollutants at different facilities.

A. Storm Water Discharges Associated With Industrial Activity From Timber Products Facilities

1. Discharges Covered Under This Sector

Eligibility for coverage under this section is limited to those facilities in

the lumber and wood products industry (primary SIC Major Group is 24), except wood kitchen cabinets manufacturers (SIC Code 2434). Permit conditions for facilities in the wood kitchen cabinets manufacturers industry (SIC Code 2434) are discussed in the wood and metal furniture and fixture manufacturing sector (Part XI.W of today's permit). SIC Major group 24 represents those "establishments engaged in cutting timber and pulpwood, merchant sawmills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood and veneer mills engaged in producing lumber and wood basic materials; and establishments engaged in wood preserving or in manufacturing finished articles made entirely of wood or related materials." ¹⁶

¹⁶ "Handbook of Standard Industrial Classifications," Office of Management and Budget, 1987.

grab sample collected from each storm water outfall. The examination of storm water grab samples shall include any observations of color, odor, turbidity, floating solids, foam, oil sheen, or 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 these samples.

The examination must be made at least once in each designated period during facility operation in the daylight hours unless there is insufficient rainfall or snow-melt to runoff. EPA expects that, whenever practicable, the same individual should carry out the collection and examination of discharges throughout the life of the permit to ensure the greatest degree of consistency possible. Examinations shall be conducted in each of the following periods for the purposes of inspecting storm water quality associated with storm water runoff and snow melt: January through March; April through June; July through September; October through December. Grab samples shall be collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 60 minutes) of when the runoff begins discharging. Reports of the visual examination include: the examination date and time, examination personnel, visual quality of the storm water discharge, and probable sources of any observed storm water contamination. The visual examination reports must be maintained onsite with the pollution prevention plan.

EPA believes that this quick and simple assessment will help the permittee to determine 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.

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 results of the visual examinations. 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.).

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.

As discussed above, EPA does not believe that chemical monitoring is necessary for facilities in this section of today's permit. EPA believes that between quarterly inspections, quarterly visual examinations, and site compliance evaluations potential sources of contaminants can be recognized, addressed, and then controlled with BMPs. In determining the monitoring requirements, EPA considered the nature of the industrial activities and significant materials exposed at these sites, and performed a review of data provided in Part 2 group applications.

Q. Storm Water Discharges Associated With Industrial Activity From Water Transportation Facilities That Have Vehicle Maintenance Shops and/or Equipment Cleaning Operations

1. Discharges Covered Under This Section

Special conditions have been developed for water transportation facilities that have vehicle and equipment maintenance shops (vehicle and equipment rehabilitation, mechanical repairs, painting, fueling, and lubrication) and equipment cleaning operations. Vehicle and equipment maintenance is a broad term used to include the following activities: vessel and equipment 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. Equipment cleaning operations include areas where vessel and vehicle exterior washdown takes place. The conditions in this section apply to storm water

discharges from vehicle and equipment maintenance shops or cleaning operations located at water transportation facilities covered under the storm water application regulations (40 CFR 122.26) and applying for coverage under today's permit.

The storm water application regulations define storm water discharges associated with industrial activity at 40 CFR 122.26(b)(14). Category (viii) of this definition includes transportation facilities classified as Standard Industrial Classification (SIC) codes 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 that have vehicle and equipment maintenance shops, equipment cleaning operations, or airport deicing operations. The category further states that only those portions of the facility that are either involved in vehicle and equipment maintenance (including vehicle and equipment rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations are associated with industrial activity. The conditions in this section only apply to water transportation facilities.

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.

Facilities covered by this section of today's permit are commonly identified by SIC code major group 44.

SIC code 44 includes facilities primarily engaged in furnishing water transportation services. The following types of facilities are examples of those covered under SIC code 44:

- a. Deep Sea Foreign Transportation of Freight (SIC 4412).
- b. Deep Sea Domestic Transportation of Freight (SIC 4424).
- c. Freight Transportation on the Great Lakes—St. Lawrence Seaway (SIC 4432).
- d. Water Transportation of Freight, Not Elsewhere Classified (SIC 4449). Including: canal barge operations; canal freight transportation; intracoastal

freight transportation lake freight transportation, except on the Great Lakes; log rafting and towing; river freight transportation, except on the St. Lawrence Seaway; and transportation of freight on bays and sounds of the oceans.

e. Deep Sea Transportation of Passengers, Except by Ferry (SIC 4481).

f. Ferries (SIC 4482). Including: car lighters (ferries); and railroad ferries.

g. Water Transportation of Passengers, Not Elsewhere Classified (SIC 4489). Including: airboats (swamp buggy rides); excursion boat operations; passenger water transportation on rivers and canals; sightseeing boats; and water taxis.

h. Marine Cargo Handling (SIC 4491). Including: docks, including buildings

and facilities; loading vessels; marine cargo handling; piers, including buildings and facilities; ship hold cleaning; stevedoring; unloading vessels; and waterfront terminal operation.

i. Towing and Tugboat Services (SIC 4492). Including: docking of ocean vessels; shifting of floating equipment within harbors; towing services, marine; tugboat service; and undocking of ocean vessels.

j. Marinas (SIC 4493).⁹⁷ Including: boat yards, storage and incidental repair; and yacht basins.

k. Water Transportation Services, Not Elsewhere Classified (SIC 4499). Including: boat cleaning; boat hiring, except pleasure; boat livery, except pleasure; boat rental, commercial; canal

operation; cargo salvaging, from distressed vessels; chartering of commercial boats; dismantling ships; lighterage; marine railways for drydocks; marine salvaging; marine surveyors, except cargo; marine wrecking, ships for scrap; piloting vessels in and out of harbors; ship cleaning, except hold cleaning; ship registers: survey and classification of ships and marine equipment; and steamship leasing.

2. Pollutants Found in Storm Water Discharges

Table Q-1 lists potential pollutant source activities that commonly take place at water transportation vehicle maintenance and equipment cleaning operations.

TABLE Q-1.—INDUSTRIAL ACTIVITIES, POLLUTANT SOURCES, AND POLLUTANTS

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 & 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 & cooling water; sanitary waste; bilge & ballast water.	Biochemical oxygen demand (BOD), bacteria, suspended solids, oil, fuel.

Sources: 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.

NPDES Storm Water Group Applications—Part 1. 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/625/7-91/013.

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.

U.S. Postal Service. May 1992. "NPDES/Storm Water Guide." AS-554.

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 water transportation facilities having vehicle maintenance and/or equipment cleaning operations as a whole and not subdivide this sector. Therefore, Table Q-2 lists data for selected parameters from facilities in the water transportation 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 merit further monitoring.

⁹⁷ "Guidelines for the Determination of Regulatory Status of Marinas and Related Operations." Facilities that are "primarily engaged" in operating marinas are best classified as SIC 4493—marinas. These facilities rent boat skips, store boats and generally perform a range of other marine services including boat cleaning and incidental boat repair. They frequently sell food, fuel, fishing supplies and may sell boats. For facilities classified as 4493 that are involved in

vehicle (vessel) maintenance activities (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or equipment cleaning operations, those portions of the facility that are involved in such vehicle maintenance activities are considered to be associated with industrial activity and are covered under the storm water regulations.

Facilities classified as 4493 that are not involved in equipment cleaning or vessel maintenance

activities (including vehicle rehabilitation, mechanical repairs, painting, and lubrication) are not intended to be covered under 40 CFR Section 122.26(b)(14)(viii) of the storm water permit application regulations. The retail sale of fuel alone at marinas, without any other vessel maintenance or equipment cleaning operations, is not considered to be grounds for coverage under the storm water regulations.

TABLE Q-2.—STATISTICS FOR CONVENTIONAL POLLUTANTS AND STORM WATERⁱ (IN mg/L UNLESS OTHERWISE INDICATED)

Pollutant Sample type	No. of Facilities		No. of Samples		Mean		Minimum		Maximum		Median		95th Percentile		99th Percentile	
	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp	Grab	Comp
BOD ₅	15	14	15	14	8.6	6.0	0.0	0.0	39.0	11.0	7.0	6.0	36.3	13.4	76.3	18.7
COD	15	14	15	14	130.9	75.8	0.0	10.0	500.0	203.0	93.0	50.5	588	254.8	1327.6	496.8
Nitrate + Nitrite Nitrogen	15	14	15	14	4.23	0.66	0.00	0.00	54.00	1.61	0.60	0.65	8.61	1.89	23.9	3.07
Total Kjeldahl Nitrogen	15	14	15	14	2.64	9.41	0.00	0.00	16.00	118.00	1.60	0.75	9.72	16.96	20.67	51.31
Oil & Grease	15	N/A	15	N/A	11.9	N/A	0.0	N/A	96.0	N/A	2.0	N/A	40.9	N/A	109.9	N/A
pH (s.u)	15	11	15	N/A	N/A	N/A	4.1	N/A	8.8	N/A	7.0	N/A	9.5	N/A	10.8	N/A
Total Phosphorus	15	14	15	14	0.27	0.15	0.00	0.00	1.20	0.32	0.10	0.17	1.32	0.51	3.19	.90
Total Suspended Solids	15	14	15	14	634	224	3	5	4330	944	135	68	3906	1116	1635.2	3351
Aluminum	4	3	4	3	3.1	2.2	0.2	0.2	6.3	5.4	3.0	1.0	24.4	14.2	81.2	40.9
Iron	4	3	4	3	26.7	5.0	0.2	0.4	94.0	8.9	6.3	5.7	N/A	40.6	40.9	122.8
Lead	4	3	4	3	0.2	0.1	0.0	0.0	0.7	0.1	0.1	0.1	N/A	.1	N/A	0.2
Zinc	4	3	4	3	0.7	0.4	0.1	0.2	2.2	0.9	0.2	0.2	N/A	1.3	N/A	2.4

ⁱ Mean, Maximum, Minimum, Median, and Percentiles include all detects and nondetects.
ⁱⁱ Composite samples.
 Note: There is no information for 95th percentile columns.

3. Options for Controlling Pollutants

The measures commonly implemented to reduce pollutants in storm water associated with water transportation vehicle maintenance and/or equipment cleaning operations are generally simple to implement and are uncomplicated practices. Table Q-3 identifies Best Management Practices (BMPs) associated with different activities that routinely take place at water transportation facilities with vehicle maintenance and equipment cleaning operations.

TABLE Q-3.—INDUSTRIAL ACTIVITIES AND POTENTIAL BEST MANAGEMENT PRACTICES

Activity	BMPs
Pressure washing	Collect discharge water and remove all visible solids before discharging to a sewer system, or where permitted, 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 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 performed over open water. Prohibit blasting or sanding activities performed 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 cover. 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. If hosing must be used as a removal method, collect wash water to remove solids and potential metals. Clean the remaining areas of the dock after a vessel has been removed and the dock raised. Remove and properly dispose of floatable and other low-density waste (wood, plastic, insulations, etc.).
Drydocking	Use plastic barriers beneath the hull, between the hull and drydock walls for containment. 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.

TABLE Q-3.—INDUSTRIAL ACTIVITIES AND POTENTIAL BEST MANAGEMENT PRACTICES—Continued

Activity	BMPs
Nondrydock containment	<p>Weight the bottom edge of the containment tarpaulins or plastic sheeting during a light breeze. Use plywood and/or plastic sheeting to cover open areas between decks when sandblasting (scuppers, railings, freeing ports, ladders, and doorways). Install tie rings or cleats, cable suspension systems, or scaffolding to make implementation containment easier.</p>
Engine maintenance and repairs	<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>
Material Handling: Bulk liquid storage and containment.	<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. Label and track the recycling of waste material (i.e., used oil, spent solvents, batteries). 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: Containerized material storage.	<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> <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> <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>
Designated material mixing areas	<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>
Shipboard process water handling	<p>If spills occur,</p> <ul style="list-style-type: none"> • Stop the source of the spill immediately. • Contain the liquid until cleanup is complete. • Deploy oil containment booms if the spill may reach the water. • Cover the spill with absorbent material. • Keep the area well ventilated. • Dispose of cleanup materials properly. • Do not use emulsifier or dispersant.
Shipboard sanitary waste disposal	<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 discharging these pollutants.</p> <p>Inspect connecting hoses for leaks.</p>
Bilge and Ballast water	<p>Discharge sanitary wastes from the ship being repaired to the yard's sanitary system or dispose of by a commercial waste disposal company.</p> <p>Use appropriate material transfer procedures, including spill prevention and containment activities.</p> <p>Collect and dispose of bilge and ballast waters which contain oils, solvents, detergents, or other additives to a licensed waste disposal company.</p>

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

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 Water Transportation Facilities and Boat Building & 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 (Section 279.20(a)(1)).

The requirements for used oil generators were designed to impose a 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 (Section 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 (Section 279.22(b) to (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 overfill 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 overfill prevention equipment by December 12, 1998.

5. Special Conditions

a. Prohibition of Non-storm Water Discharges. In addition to the non-storm water discharges prohibited in part III.A of the permit, this section specifically prohibits the following: bilge and ballast water, pressure wash water, sanitary wastes, and cooling water originating from vessels are not authorized by this section. 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. Certain non-storm water discharges, however, may be authorized by this permit. Part III.A.2 of today's permit lists these discharges.

This section does not authorize the non-storm water discharge of pressure wash water. Pressure washing is used to remove marine growth from vessels. EPA has found that unpermitted releases of pressure wash water is a habitual problem at water transportation facilities. Marine growths and paint debris found in the wash water can contain significant quantities of heavy metals, and this water cannot be discharged.

6. Storm Water Pollution Prevention Plan Requirements

The conditions that apply to water transportation facilities with vehicle maintenance and/or equipment cleaning operations build upon the requirements set forth in the baseline conditions permit for storm water discharges from

industrial activities discussed previously.

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 permit conditions listed in the front section of this factsheet, which are based on the baseline general permit of September 9, 1992. Here it is expressed in more appropriate terms for the water transportation industry. The baseline general permit includes "vehicle and equipment maintenance and/or cleaning areas." The language "processing areas", as described under the baseline general permit, has been specified to include painting, blasting, welding, and metal fabrication for this section. EPA believes that this specificity is appropriate for the water transportation industry and that these areas may potentially be a significant source of pollutants to storm water. 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. This again is the same requirement, but it is expressed in more specific terms for this industry. 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, orderly manner. This section also requires that the following areas must be specifically addressed:

(a) Pressure Washing Area—When pressure washing is used to remove

marine growth from vessels, the discharge water must be permitted by an NPDES permit. 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 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. Such included items may be the prohibition of performing uncontained blasting and painting over open water or blasting and painting during windy conditions which can render containment ineffective.

(3) *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.

(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 may 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, 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 & solvent mixing, disposal of process wastewater streams from vessels). The facility may 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 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 should 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 may 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 runoff from water transportation facilities which have vehicle maintenance and/or equipment cleaning activities. Based upon the September

1992 "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 water transportation facilities. EPA believes that the incorporation of management practices such as those suggested will substantially reduce the potential that these activities and areas will significantly contribute to the pollution of storm water discharges. In addition, EPA believes that these requirements continue to provide the necessary flexibility to address the variable risk for pollutants in storm water discharges associated with different facilities. Further, many facilities will find that management measures that they have already incorporated into the facility's operation, such as the installation of overflow protection equipment and labelling and maintenance of used oil storage units, that are already required under existing EPA programs will meet the requirements of this section.

Under the preventive maintenance requirements of the storm water pollution prevention plan elements, the plan specifically includes 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 such as abrasive blasting which occur at water transportation facilities, specific routine attention needs to be placed on the collection and proper disposal of spent abrasive materials, paint chips, and other solids.

Under the inspection requirements of the storm water pollution prevention plan elements, 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 area, blasting 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 shall be maintained.

The purpose of the inspections is to check on the implementation 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 highly encouraged. The checklist will ensure that all required areas are

inspected, as well as help to meet the record keeping requirements.

Under the employee training component of the storm water pollution prevention plan requirements, the permittee is required to identify at least annual (once per year) dates for such 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 facility must consider posting easy to read descriptions or graphic depictions of BMPs and emergency phone numbers in the work areas. Unlike some industrial operations, the industrial activities

associated with water transportation 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 on pollution prevention procedures and requirements.

Monitoring and Reporting Requirements

a. Analytical Monitoring Requirements. Under the revised methodology for determining pollutants of concern for the various industrial sectors water transportation facilities must perform analytical monitoring. Facilities must collect and analyze samples of their storm water discharges for the pollutants listed in Table Q-4. The median levels of the pollutants

listed in Table Q-4 were found to be above benchmark levels for water transportation facilities that submitted quantitative data in the group application process. EPA is requiring monitoring after the pollution prevention plan has been implemented to ensure that a reduction of pollutants is realized.

At a minimum, storm water discharges from water transportation facilities must be monitored quarterly during the second year of permit coverage. Samples must be collected at least once in each of the following periods: January through March; April through June; July through September; and October through December. At the end of the second year of permit coverage, a facility must calculate the average concentration for each parameter listed in Table Q-4. If the permittee collects more than four samples in this period, then they must calculate an average concentration for each pollutant of concern for all samples analyzed.

TABLE Q-4.—INDUSTRY MONITORING REQUIREMENTS

Pollutants of concern	Cut-off concentration
Total Recoverable Aluminum	0.75 mg/L.
Total Recoverable Iron	1.0 mg/L.
Total Recoverable Lead	0.0816 mg/L.
Total Recoverable Zinc	0.065 mg/L.

If the average concentration for a parameter is less than or equal to the value listed in Table Q-4, then the permittee is not required to conduct quantitative analysis for that parameter during the fourth year of the permit. If, however, the average concentration for a parameter is greater than the cut-off concentration listed in Table Q-4, then the permittee is required to conduct quarterly monitoring for that parameter during the fourth year of permit coverage. Monitoring is not required during the first, third, and fifth year of the permit. The exclusion from monitoring in the fourth year of the permit is conditional on the facility maintaining industrial operations and BMPs that will ensure a quality of storm water discharges consistent with the average concentrations recorded during the second year of the permit. The schedule of monitoring is presented in Table Q-5.

TABLE Q-5.—SCHEDULE OF MONITORING

2nd Year of Permit Coverage	<ul style="list-style-type: none"> • Conduct quarterly monitoring. • Calculate the average concentration for all parameters analyzed during this period. • If average concentration is greater than the value listed in Table Q-5, then quarterly sampling is required during the fourth year of the permit. • If average concentration is less than or equal to the value listed in Table Q-5, then no further sampling is required for that parameter.
4th Year of Permit Coverage	<ul style="list-style-type: none"> • Conduct quarterly monitoring for any parameter where the average concentration in year 2 of the permit is greater than the value listed in Table Q-5. • If industrial activities or the pollution prevention plan have been altered such that storm water discharges may be adversely affected, quarterly monitoring is required for all parameters of concern.

In cases where the average concentration of a parameter exceeds the cut-off concentration, EPA expects permittees to place special emphasis on methods for reducing the presence of those parameters in storm water discharges. Quarterly monitoring in the fourth year of the permit will reassess the effectiveness of the adjusted pollution prevention plan.

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 chemical sampling.

b. Alternative Certification. Throughout today's permit, EPA has included monitoring requirements for facilities which the Agency believes have the potential for contributing significant levels of pollutants to storm water discharges. The alternative described below is necessary to ensure that monitoring requirements are only imposed on those facilities that do, in fact, have storm water discharges containing pollutants at concentrations of concern. EPA has determined

that if materials and activities are not exposed to storm water at the site, then the potential for pollutants to contaminate storm water discharges does not warrant monitoring.

Therefore, a discharger is not subject to the monitoring requirements of this Part provided the discharger makes a certification for a given outfall, on a pollutant-by-pollutant basis in lieu of monitoring reports required under paragraph c below under penalty of law, signed in accordance with Part VII.G. (Signatory Requirements), that material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, industrial machinery or operations, significant materials from past industrial activity, that are located in areas of the facility that are within the drainage area of the outfall are not presently exposed to storm water and will not be exposed to storm water for the certification period. Such certification must be retained in the storm water pollution prevention plan and submitted to EPA. In the case of certifying that a pollutant is not present, the permittee must submit the certification along with the monitoring reports required under paragraph (c) below. If the permittee cannot certify for an entire period, they must submit the date exposure was eliminated and any monitoring required up until that date. This certification option is not applicable to compliance monitoring requirements associated with effluent limitations. EPA does not expect facilities to be able to exercise this certification for indicator parameters, such as TSS and BOD.

c. Reporting Requirements. Permittees are required to submit all monitoring results obtained during the second and fourth year of permit coverage within 3 months of the conclusion of each year. For each outfall, one signed Discharge Monitoring Report Form must be submitted per storm event sampled. For facilities conducting monitoring beyond the minimum requirements an additional Discharge Monitoring Report Form must be filed for each analysis. The permittee must include a measurement or estimate of the total precipitation, volume of runoff, and peak flow rate of runoff for each storm event sampled.

d. Sample Type. All discharge data shall be reported for grab 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. The required 72-hour storm event interval is waived where the preceding

measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the discharger shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or nonprocess water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

e. Representative Discharge. 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 test the effluent of one of such outfalls and report that the quantitative 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 effluent. 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.

f. Quarterly Visual Examination of Storm Water Quality. Quarterly visual examinations of storm water discharges from each outfall are required at water transportation facilities. The examination must be of a grab sample collected from each storm water outfall. The examination of storm water grab samples shall include any observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or 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 these samples.

The examination must be made at least once in each of the designated periods during daylight unless there is insufficient rainfall or snow-melt to runoff. Where practicable, the same individual should carry out the collection and examination of discharges throughout the life of the permit to ensure the greatest degree of consistency possible. Grab samples shall be collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 60 minutes) of when the runoff begins discharging. Reports of the visual examination include: the examination date and time, examination personnel, visual quality of the storm water discharge, and probable sources of any observed storm water contamination. The visual examination reports must be maintained onsite with the pollution prevention plan. The visual examination must be conducted in each of the following periods: January through March; April through June; July through September; and October through December.

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 such documentation on-site with the results of the visual examinations. 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.).

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 inspections. 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.

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

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).

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.
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 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.

APPENDIX B

NON-STORMWATER DISCHARGE ASSESSMENT & CERTIFICATION

APPENDIX C

GENERAL BMPs

BMPs for Storage Areas, Office, Retail & Parking

The following Best Management Practices (BMPs) are established under the authority and requirement of the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). Implementation of the BMPs are required for tenants on or operating within all of Port Everglades, not just designated tenant leasehold areas.

Proper Disposal of Fluids and Wastes

All tenants must properly dispose of solid and liquid wastes and contaminated stormwater. There are generally four options for disposal, depending on the type of waste:

- Recycling facilities
- Municipal solid waste disposal facilities
- Hazardous waste treatment, storage, and disposal facilities
- Sanitary sewer

Dangerous and hazardous wastes must be properly transported to an appropriate hazardous waste disposal, treatment, and storage facility. Liquid wastes and contaminated stormwater can only be discharged to the sanitary sewer system with prior approval from FDEP (Domestic Wastewater Industrial Pretreatment Program). If a waste cannot be legally discharged to a sanitary sewer, one of the other three disposal options must be used. Do not discharge liquid wastes to the storm sewer. Only stormwater can be discharged to the storm sewer.

Proper Storage of Solid Wastes

Solid waste must be stored in suitable containers as follows:

- Storage containers must be covered by some means or have leak-proof lids; lids must be kept closed.
- Storage containers must be checked for leaks and replaced if they are leaking, corroded, or otherwise deteriorating.
- Do not allow accumulated waste to exceed the capacity of the storage container. If this occurs, obtain and use another storage container. Do not overfill containers.
- The waste storage area must be swept or otherwise cleaned frequently to collect all loose solids for proper disposal in a storage container. Do not hose down the area.
- Drain dumpsters, dumpster pads and trash compactors to the sanitary sewer, after receiving pre-approval as indicated above.
- Use spill cleanup materials to clean up fats, oil, and grease or other contaminants.

Spill Prevention and Cleanup

To reduce the potential for spills, implement the following practices and have spill cleanup kits available at activity locations where spills may occur:

- Locate fluid storage, mechanical shops, and other activities with spill potential AWAY from stormwater drop inlets.
- Clearly label all containers that contain potential pollutants.
- Store and transport liquid materials in appropriate containers with tight fitting lids.
- Place drip pans underneath all liquid containers, fittings, valves, and elsewhere that fluids are likely to spill or leak.

BMPs for Storage Areas, Office, Retail & Parking

- Use tarpaulins, ground cloths, or drip pans in areas where materials are mixed, carried, transferred, and applied to capture any spilled materials.
- Train employees on the safe techniques for handling materials that are used on the site and encourage them to check for leaks and spills.

Develop and implement a spill plan. Update it annually. Post a written summary of the plan at appropriate points in the building, such as loading docks, product storage areas, waste storage areas, and near a phone. Store spill cleanup kits near areas with a high potential for spills so that they are easily accessible in the event of a spill. The contents of the spill kit must be appropriate to the types and quantities of materials stored or used at the Facility. Keep the spill kit stocked.

In the event of a spill, implement the following procedures:

- Block off and seal the nearby inlet(s) to the stormwater drainage system to prevent materials from entering the drainage system.
- Implement the spill plan immediately.
- Contact your company's employee(s) responsible for implementing the spill plan & Port Everglades's contact.
- Use an appropriate material to clean up spills. Do not use emulsifiers or dispersants such as liquid detergents or degreasers.
- Immediately report all spills that could reach storm drains, the sanitary sewer, streams, rivers, or other surface waters or wetlands to the Port spill contact, and the appropriate agency (see below).
- Do not wash absorbent material into interior floor drains or exterior storm drains.
- Dispose of used spill control materials in accordance with federal, state, and local laws and regulations.

Provide Oversight and Training for Staff

Train employees annually in the operation, maintenance, and inspections of BMPs. This training must be documented. Further actions include assigning one or more qualified individuals to be responsible for the oversight and training of staff regarding stormwater pollution control. Hold regular meetings to review the overall operation of the BMPs, establish responsibilities for inspections and O&M, and determine responsibilities for emergency situations.

Loading and Unloading of Materials

The following BMPs are required for loading/unloading areas:

- Frequently sweep surfaces, including those that have been covered with containers or other materials, to remove accumulated debris and other material that could otherwise be washed off by stormwater. **Do not** sweep this debris into storm drains.
- Check loading and unloading equipment such as valves, hoses, pumps, flanges, and connections regularly for leaks, and repair as needed. Use drip pans and other prevention practices.
- Prevent clean stormwater from entering the loading/unloading area and conduct the activity under cover or indoors.
- Install and maintain overhangs or door skirts that enclose the trailer end to prevent contact with rainwater.

BMPs for Storage Areas, Office, Retail & Parking

Parking Lot Maintenance and Storage of Vehicles and Equipment

The following BMPs are required for parking and vehicle/equipment storage areas:

- Avoid and reduce washing activities. Do not use soap or other chemicals unless the area drains to a sanitary sewer. When wash water is discharged to the sanitary sewer, check if pre-treatment is required or necessary before being discharged.
- Sweep or vacuum parking lots, storage areas, sidewalks, and driveways regularly to collect dirt, waste, and debris and dispose as solid waste.
- Do not hose down or pressure wash areas that drain to a storm drain or water body.
- If a parking lot must be washed, discharge the wash water as pre-approved by FDEP. Cover all affected storm drains to prevent wash water from entering a water body.

Outdoor Storage of Equipment, Materials, and Containers

The following BMPs are required for the outdoor storage of equipment, stockpiled materials, and portable containers used for storage of liquids or solids. Potential pollutants can be leaked, spilled, or leached from stored materials and contaminate stormwater. The following are required for all outdoor storage areas:

- Do not hose down the contained stockpile area if the discharge will flow into a storm drain or a drainage conveyance.
- Sweep paved storage areas frequently to collect and dispose of loose solid materials.
- Place temporary plastic sheeting over stockpiled materials. Anchor sheeting to prevent contact with rainfall.
- Place tight-fitting lids on all containers.
- All containers must have labels identifying their contents. Apply labels and position containers so that the labels are clearly visible. If the material is hazardous waste it should have a hazardous waste label.
- Inspect container storage areas regularly for corrosion, structural failure, spills, leaks, overfills, and failure of piping systems. Check containers daily for leaks and spills. Replace containers, and replace and tighten bungs in all drums as needed.
- Secure drums in a manner that prevents accidental spillage, pilferage, or any unauthorized use.
- Place containers mounted for direct removal of a liquid chemical for use by employees inside a secure containment area with drip pan or other such containment method.
- Hazardous and dangerous materials must be stored only in areas designated by Facility management. These storage areas must be equipped with proper secondary containment, protected from stormwater, and comply with applicable fire codes.

Maintenance and Washing of Cargo Containers

The following BMPs are required during pressure or other washing of cargo containers. Potential pollutants can be leaked, spilled, or leached from cargo containers and contaminate stormwater. The following BMPs are required:

- Do not wash containers if the discharge will flow into a storm drain or a drainage conveyance.
- Containers should only be washed (exterior and interior) in a designated wash area where the wash water, cleaning chemicals, and removed remnants are properly handled, disposed of, and discharged in accordance with all applicable federal, state, and local environmental laws and regulations.

BMPs for Storage Areas, Office, Retail & Parking

- Sweep paved storage areas frequently to collect and dispose of loose solid materials.
- Inspect container storage areas regularly for corrosion, structural failure, spills, leaks, and overfills. Check containers daily for leaks and spills.

Contact Information

All spills are reportable to the Port. Please make sure your message gets immediately to the contact persons below, not just leave a message.

- **Erik Neugaard**, Environmental Program Manager, Port Everglades Department, Broward County, FL **954.468.0164** (Office) or **(954) 881-6511** (Cell) ENeugaard@Broward.org
- **Normagene Dmytriw**, Insurance and Risk Manager, Port Everglades Department, Broward County, FL **954.468.3531** (Office) or **(954) 812-6113** (Cell) NDmytriw@Broward.org

Disclaimer

Reporting spills to the Port does not relieve any other reportable responsibility to regulatory authorities.

These BMPs shall in no way be interpreted, construed or relied upon as any form of permit, license, easement or right for a Facility owner or operator to discharge stormwater on or into the Port's stormwater system or property. The utilization of the Port's stormwater system by an offsite facility owner or operator is a privilege, not a right. It is the sole responsibility of each Facility to continuously comply with all federal, state, local and water management district notice requirements, reporting requirements, permit requirements, sampling requirements, orders, agreements, laws and rules.

These BMPs shall in no way be interpreted, construed or relied upon as any form of rule, law, permit, code or ordinance; they are minimum required practices that should be implemented and utilized by others that want the Port to consider accepting its stormwater discharges.

The management and handling of hazardous waste as defined in 40 CFR Part 261, Subpart D, or characterized in 40 CFR PART 261, Subpart C, have many specific requirements, including but not limited to a manifest system, storage time limits, emergency planning and training of personnel. These BMPs do not necessarily fulfil all of those requirements.

The use of Port Everglades waterways and facilities, including its stormwater system, constitutes a consent to the terms and conditions of Tariff No. 12, and to be governed by all rules and regulations contained therein.

BMPs FOR COMMERCIAL VESSELS

The following Best Management Practices (BMPs) are established under the authority and requirement of the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). Implementation of the BMPs are required for tenants on or operating within all of Port Everglades, not just designated tenant leasehold areas.

Warnings

- All vessel discharges of water or pollutants shall be in strict compliance with all local, state, and federal laws and regulations, including without limitation the U.S. Federal Clean Water Act.
- Hazardous materials or chemicals should be stored on the vessel in accordance with federal, state, and local laws and regulations.
- It is illegal to discharge raw or untreated sewage, oil-contaminated bilge water, ballast water, or any water with an oily sheen or contamination into the waters of the United States.
- The discharge of laundry water in state waters from a vessel is prohibited.
- The disposal of used oil, antifreeze, paints, solvents, varnishes, gas cylinders, preservatives and batteries in the garbage is prohibited.
- Hazardous or flammable chemical materials, gas cylinders, and batteries shall not be improperly stored on Port property for extended durations. Proper storage locations and procedures must be pre-approved by a Port representative.
- Vessels allowed to receive bunkers must strictly follow all Port, Broward County and City Fire Department, U.S. Coastguard, and State of Florida bunkering requirements. In addition, Port terminal management must be notified prior to any fueling while alongside Port piers.
- Unless items are in transport, do not abandon drums or containers of hazardous materials, empty drums, or gas cylinders on the dock. If materials are left behind, a fee will be assessed based on administrative, cleanup, disposal, professional, and legal costs and expenses incurred by the Port, its designated representatives, and contractors.
- It is the responsibility of the vessel owner to contact a service provider to dispose of contaminated products, including bilge water, in an appropriate manner.

Management of Hazardous Chemicals, Cleaners and Wastes

- Prevent oil contamination of bilge water.
- Promptly collect bilge, ballast, and all water with an oily sheen for proper disposal.
- Remove and dispose used oil and oil filters according to all local, state, and federal laws and regulations.
- Clear and contain any debris, trash, sanding dust, paint chips, slag, etc. from work areas as soon as practical after any maintenance or repair activity, and place in lidded container for proper disposal. Do not wash these solids into the water or storm drains.
- Dispose of oil-soaked absorbents when all liquids are fully absorbed. Used absorbents should be properly sealed/packaged and disposed of in accordance with all applicable laws.

Spill Prevention and Response

- Must carry aboard the vessel sufficient absorbent materials and spill containment instruments to confine a spill; per local, state, and federal requirements.
- All paint and solvent mixing, fuel mixing, and similar handling of liquids must be done within secondary containment (drip pans, or with sufficient capacity) so that nothing can spill directly into the water.
- If a spill occurs, **stop the spill or leakage source**, and **contain the spill**.
- Report spills into the water **ASAP** to the U.S. Coast Guard National Response Center at 1-800-424-8802 and contact Port Operations.
- Clean up any spills on the dock or vessel **ASAP** and dispose of wastes according to local, state, and federal requirements.

BMPs FOR COMMERCIAL VESSELS

Vessel Repair, Maintenance, and Pier Activity

- Extensive vessel repair work and ALL bottom cleaning must occur in a commercially permitted boatyard or shipyard.
- Any painting, scraping and refinishing must be contained utilizing appropriate practice so that all debris is collected. Tarping or other adequate containment of the work area is required to prevent any release of sanding debris or paint to the marine environment. All collected debris and materials must be removed regularly to prevent their release. ALL discharges are hauled and disposed of at an appropriate facility. All such activities must be performed in accordance with all local, state, and federal laws and regulations.
- Welding sparks, slag or residue must not enter water and must be captured. Dispose of cooled residue in a solid waste dumpster.
- If materials such as paints, thinners, oils, etc. must be stored on the pier, then all items must be contained (secondary containment) and covered from the rain.

Contact Information

All spills are reportable to the Port. Please make sure your message gets immediately to the contact persons below, not just leave a message.

- **Erik Neugaard**, Environmental Program Manager, Port Everglades Department, Broward County, FL **954.468.0164** (Office) or **(954) 881-6511** (Cell) ENeugaard@Broward.org
- **Normagene Dmytriw**, Insurance and Risk Manager, Port Everglades Department, Broward County, FL **954.468.3531** (Office) or **(954) 812-6113** (Cell) NDmytriw@Broward.org

Disclaimer

Reporting spills to the Port does not relieve any other reportable responsibility to regulatory authorities.

The Port terminal facilities are not boatyards, and any in-water maintenance and repair are subject to local, state, and federal laws and regulations. Extensive work or modifications must be conducted at a boatyard or shipyard.

These BMPs shall in no way be interpreted, construed or relied upon as any form of permit, license, easement or right for a Facility owner or operator to discharge stormwater on or into the Port's stormwater system or property. The utilization of the Port's stormwater system by an offsite facility owner or operator is a privilege, not a right. It is the sole responsibility of each Facility to continuously comply with all federal, state, local and water management district notice requirements, reporting requirements, permit requirements, sampling requirements, orders, agreements, laws and rules.

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The management and handling of hazardous waste as defined in 40 CFR Part 261, Subpart D, or characterized in 40 CFR PART 261, Subpart C, have many specific requirements, including but not limited to a manifest system, storage time limits, emergency planning and training of personnel. These BMPs do not necessarily fulfill all of those requirements.

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APPENDIX D

BULK PETROLEUM STORAGE FACILITIES BMPs

BMPs for Petroleum Terminal and Fuel Farm Facilities

The following Best Management Practices (BMPs) are established under the authority and requirement of the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP). Implementation of the BMPs are required for tenants on or operating within all of Port Everglades, not just designated tenant leasehold areas.

Standard Operating Procedures

1. The following Standard Operating Procedures (40 CFR 112.8) shall be complied with, including:
 - a. All above ground drainage pumps, piping and valves shall be subjected to regular inspections.
 - b. All drainage from diked storage areas must be manually controlled. All valves must be manually operated, and pumps manually activated. Drainage valves may NOT be of the flapper-type (butterfly valves).
 - c. Valves must be kept closed and pumps off during normal operation.
 - d. Drainage of accumulated rainwater must not take place except under responsible supervision by trained personnel.
 - e. All accumulated rainwater MUST be inspected for oil product and sheen prior to discharge. Accumulated rainwater MUST NOT be discharged if oil product or sheen is present. Use absorbent materials to remove oil product and sheen prior to discharging accumulated rainwater.
 - f. Manually operate drainage valves and/or pumps to remove accumulated rainwater. Reseal (close) valves/shut off pumps after drainage.
 - g. Keep a record or log of all inspections and drainage events. These must be kept on file for 3 years.
2. Prior to stormwater discharge events, the Facility shall remove, clean up or secure all trash, debris or other materials from the Facility's property that could move or be caught up in stormwater discharged from the Facility.
3. Prior to stormwater discharge events, the Facility shall remove, clean up or secure all paint, rust removal, sand blasting and related products, materials and sediments that could move or be caught up in stormwater discharged from the Facility.
4. Prior to stormwater discharge events, the Facility shall remove, clean up or secure all exposed petroleum or petroleum-laden materials (including without limitation, exposed gravel, soils, rags, etc.), product, spills, pooling or accumulated rain water from prior rain events that could move or be caught up in stormwater discharged from the Facility.
5. During stormwater discharge events, the Facility shall take all steps necessary to avoid discharge-related sediment, turbidity, scouring or channeling.
6. During stormwater discharge events, the Facility shall not discharge stormwater in excessive volume or flow rates beyond the known or obvious capacity of the Port's stormwater system that is available or impacted by the Facility's discharge. Questions and information requests regarding the capacity of the Port's stormwater system should be directed in advance to the Port's Environmental Program.
7. The Facility shall comply with its SWPPP and SPCC plan requirements and shall keep a current copy of its SWPPP and SPCC on file with the Port.

BMPs for Petroleum Terminal and Fuel Farm Facilities

Contact Information

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- **Erik Neugaard**, Environmental Program Manager, Port Everglades Department, Broward County, FL **954.468.0164** (Office) or **(954) 881-6511** (Cell) ENeugaard@Broward.org
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APPENDIX E

COMPREHENSIVE SITE COMPLIANCE EVALUATION

Comprehensive Site Compliance Evaluation

PEV Stormwater System SWPPP
Port Everglades Department, Broward County

October 30 2018

Notice

This document and its contents have been prepared and are intended solely for Port Everglades Department, Broward County's information and use in relation to the update of the Multi-Sectorial General Permit for industrial stormwater discharges.

ATKINS assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 17 pages including the cover.

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Client signoff

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Table of contents

Chapter	Pages	
1. Introduction and Scope	4	
2. Confirm Accuracy of Description of Potential Pollution Sources.	4	
3. Determine the Effectiveness of the SWPPP.	4	
3.1. Inspections of stormwater features.	4	
3.2. Evaluation of the Chemical Analysis Results for the Year.	5	
3.3. Evaluation of the Effluent's Visual Examinations	6	
4. Assess Compliance with the Terms and Conditions of the Permit.	7	
4.1. Inventory of Significant Spills and Leaks of Toxic or Hazardous Pollutants.	7	
4.2. Monthly Inspections/Reports of Designated Equipment and Storage Areas.	8	
4.3. Monthly Maintenance.	8	
4.4. Quarterly Visual examination of stormwater quality.	8	
4.5. Annual Employee training.	9	
4.6. Annual Comprehensive Site Evaluation.	9	
4.7. Monitoring: Years 2 and 4 or the Permit Cycle.	9	
4.8. Reporting: Years 2 and 4 of the Permit Cycle.	10	
4.9. Every 5 years, inventory materials exposed to precipitation.	10	
4.10. Every 5 years, conduct Outfall Visual Examination.	11	
5. Summary of Noncompliance.	11	
6. Recommendations	12	
7. Personnel	12	
8. Certification	13	
Appendices	14	
Appendix A. Stormwater Drop-Inlet Inspection	15	
Appendix B. Outfall Visual Examination and Certification of Non-Stormwater Discharge	16	
Tables		
Table 1	Summary of Sector Q Parameters Results, Year 2018	5
Table 2	Effluent Visual Examinations, Year 2018	6

1. Introduction and Scope

The State of Florida Multi-Sector General Permit (MSGP) No. FLR05B255 requires annual Comprehensive Site Compliance Evaluations to (1) confirm the accuracy of the description of potential pollution sources contained in the plan, (2) determine the effectiveness of the SWPPP, and (3) assess compliance with the terms and conditions of the permit. Port Everglades (PEV) requested Atkins undertake this evaluation. An outline was submitted to, and was approved by the PEV, which consisted of an inventory of the potential pollution sources, inspections of a random selection of stormwater features, an evaluation of the chemical analysis results for the year, a records review of compliance requirements, and interviews to key staff. The evaluation results follow.

2. Confirm Accuracy of Description of Potential Pollution Sources

The pollution sources observed match those identified in the SWPPP. No additional pollution sources were observed outside those listed in Section 3.1 of the SWPPP, Significant Materials Stored, as updated in its 2018 version.

3. Determine the Effectiveness of the SWPPP.

The effectiveness of the plan can be expressed in terms of sedimentation control and of outfall water quality. As described below, there is room for improvement on both parameters.

3.1. Inspections of Stormwater Features

Eighteen stormwater system (SWS) features (drop inlets, curb inlets, manholes), or 0.2% of the approximately 921 drop inlets, were selected at random to evaluate apparent condition, sediment freeboard (distance between top of sediment in the trap and the lower edge of lowest pipe), percent obstruction of the connecting pipes, and depth of sediment, with the following observations:

- Condition of the SWS features appeared to be good (minimal or no cracks in the concrete, steel grate/lid not corroded), including their baffles, when present. 95% were described as “good”, and 5% were “fair”. None were characterized as “poor” condition.
- An average of 12” of sediment (Range 0” to 28”) were measured in the sediment traps. The depth of the sediment traps is variable, and conditions didn’t always allow for a determination of percent capacity available. Sediments characteristics recorded include “cemented” (near an active construction site), “gravelly”, and “soft”.
- Obstructions of the conduit pipes with sediments ranged from 0% to 50%; however, on 50% of the SWS features sampled the water level concealed the observation.

The data collected is summarized in Appendix A.

The Port contracted with A to Z Statewide Plumbing Inc. to vacuum-clean all drop inlet sediment traps. That work started early 2018, is underway and approximately 50% completed. Also, the Public Works Department has included in its budget the purchase of a vacuum truck to perform routine maintenance of the system beyond the ongoing sediment removal.

3.2. Evaluation of the Chemical Analysis Results for Year 2018

Samples have been collected during three quarterly events this year, and previous years did not have qualifying rain events. Therefore, data analysis is based on the first three quarters of 2018 at three outfall locations, with a duplicate for one of the sites: twelve data values for each parameter. Table 1 summarizes the results of Year 2018 analysis results available to date.

Table 1. Summary of Sector Q Parameters Results, Year 2018

Precipitation Sample Date	0.10 3/7/2018	0.62 6/22/2018	0.76 8/13/2018	Benchmark values
Site#1				
Al	243	36.1	281	750
Fe	587	90.4	500	1,000
Pb	5.64	0.57	2.51	750
Zn	279	40.3	55.1	117
Site#2				
Al	243	30.4	302	
Fe	2,220	1,430	354	
Pb	1.62	1.13	2.36	
Zn	262	84.2	63.8	
Site#2 Duplicate				
Al	200	38.4	284	
Fe	2,360	1,220	348	
Pb	1.75	1.48	2.41	
Zn	274	103	66.9	
Site#3				
Al	618	86.70	281	
Fe	1,190	67.60	828	
Pb	11.50	0.68	3.27	
Zn	834	68.10	161	
Results and Benchmark values in µg/L, Precipitation in inches Zeros entered in lieu of <detection limit.				
Results in this format exceed the benchmark value.				

Instead of maximum contaminant levels, the permit has “benchmark values” for the contaminants commonly found in ports (Sector Q): Aluminum (Al), iron (Fe), lead (Pb) and zinc (Zn).

- The PEV effluents meet the aluminum (750 µg/L) and the lead (750 µg/L) benchmark values for all twelve data points: all three quarters at all three sampling sites.
- The iron benchmark value (1,000 µg/L) was exceeded in five of twelve (42%) samples (Average = 933 µg/L, Range (67.7 to 2,360 µg/L), the highest value was obtained from an outfall serving Midport.
- The zinc benchmark (117 µg/L) was exceeded in five of twelve (42%) samples (Average = 191 µg/L, Range (40.3 to 834 µg/L), the highest value was obtained from an outfall serving Southport.

The benchmark values were exceeded more often (seven exceedances) before the rainy season (May through November, Peak in September) with decreasing frequency in the second quarter (two exceedances) and the third quarter (one exceedance). This could indicate material deposition over the Port’s impervious surface during the dry season, which is washed down during the first rains of the year and detected during the first quarter’s sampling, and as the rainy season progresses the sampling detects smaller deposition periods between storm events. Likewise, it could indicate contaminants accumulated within the stormwater system during the dry season, which is detected during the first quarterly monitoring, and which is removed with each successive storm event.

Compliance with the benchmark values is based on the average of four quarters of analytical data, and we only have results from three quarters to base our determination. Results to date indicate that the SWPPP pollution control measures, as presently implemented, require improvement. This report’s section on Recommendations provides corrective actions that have been discussed with the Port, some of which are in the process of implementation.

3.3. Evaluation of the Effluents’ Visual Examinations

Observations of the effluent were made in a well-lit area during three quarterly events this year. There are nine data values for each of the following parameters: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollution. Table 2 presents the observations.

Table 2. Effluent Visual Examinations, Year 2018.

Date	3/7/2018	6/22/2018	8/13/2018
Site#1			
Color	Beige	None	None
Odor	None	None	None
Clarity	Medium	Clear	Clear
Floating Solids	Minimal	None	Vegetation Fragments
Settled Solids	None	Minimal	Minimal
Suspended Solids	Some	Minimal	None
Foam	None	None	None
Sheen	None	None	None

Table 2. Effluent Visual Examinations, Year 2018.

Date	3/7/2018	6/22/2018	8/13/2018
Site#2			
Color	Beige	None	None
Odor	None	Minimal	None
Clarity	Medium	Clear	Clear
Floating Solids	Minimal	Minimal	None
Settled Solids	None	Some	Minimal
Suspended Solids	Some	Minimal	None
Foam	None	None	None
Sheen	None	None	None
Site#3			
Color	Beige	None	Beige
Odor	None	Minimal	Minimal
Clarity	Medium	Clear	Clear
Floating Solids	Some	Minimal	Some
Settled Solids	None	Moderate	Some
Suspended Solids	Some	Minimal	Minimal
Foam	None	None	None
Sheen	Some	None	None

Based on the visual examination of the effluent during these three events, there are no apparent indications of stormwater pollution.

4. Assess Compliance with the Terms and Conditions of the Permit

Below are the permit requirement aspects summarized, followed by relevant observations from the field, interviews with key personnel, and records review.

4.1. Inventory of Significant Spills and Leaks of Toxic or Hazardous Pollutants

All spills are reported to the Port's Risk Management Department and are logged into a reporting system called KLEIN. Logged spills were reviewed to evaluate the KLEIN system's utility as a compliance tool. The system tracks all actions related to the spill containment and abatement efforts. The system also allows for periodic reporting, which could be used by the Port's Environmental Program as required, yet this is not presently done. The system does not track the fate of the spilled/recovered contaminants.

4.2. Monthly Inspections/Reports of Designated Equipment and Storage Areas

- Port personnel evaluate frequently (at least weekly) the implementation of the SWPPP in construction areas. Records are not centrally maintained.
- For material storage and equipment areas the Port inspections are sporadic.
- There is no checklist for the inspection to designated areas.
- Tracking of inspections and their follow-up is not consistent. A procedure was not available to ensure that appropriate actions are taken in response to the inspections.
- Records of inspections and their follow-up are not centrally and consistently maintained.

4.3. Monthly Maintenance

- At any one time, the Port has one to two persons on sweep duty. The Port's sweeper truck operates on all major roads and sweeps terminals after every operation.
- Stevedores in the Crain Rail area also have a sweeper truck, and they sweep the terminals after every operation.
- The Port has a recycling program for cardboard, paper and metals, periodically removing scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc.
- The Port conducts daily trash removal from all public spaces.
- The Port conducts weekly yard maintenance and cleanup.

4.4. Quarterly Visual Examination of Stormwater Quality

- Quarterly examinations have been conducted for three quarters of 2018, and the Port is on the lookout for a Qualifying Storm Event to conduct the fourth quarterly examination of 2018. Grab samples are observed during daylight in a well-lit area, and evaluated for color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other obvious indicators of storm water pollution.
- During 2017 a qualifying rain event was not observed during work hours. This is the condition under which visual examination of stormwater quality is supposed to be conducted. Auto-samplers were purchased at the beginning of 2018 that collect samples during qualifying rain events which take place after hours, and stores them for subsequent visual examination.

- Records were not found documenting quarterly examination of the stormwater quality for 2013 through 2016.

4.5. Annual Employee Training

- On September 28, 2018 Employee Training was conducted at Port Everglades for employees and tenants, with 23 people in attendance. Topics included: 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 Port tenants were informed about the BMPs and the requirement to follow these practices.
- On August 28th and 29th, 2017 the Florida Stormwater, Erosion and Sedimentation Control Inspector Training and Qualification Certificate Course was conducted in Port Everglades free for employees and tenants of Port Everglades, with 120 people in attendance.
- Records were not found to document employee training for 2014 through 2016.

4.6. Annual Comprehensive Site Evaluation

This report is meant to fulfil the Annual Comprehensive Site Evaluation for 2018, specifically to:

- Confirm the accuracy of the description of potential pollution sources contained in the plan.
- Determine the effectiveness of the plan.
- Assess compliance with the terms and conditions of the permit.

Records were not found that document Annual Comprehensive Site Evaluation for 2014 through 2016.

4.7. Monitoring: Years 2 and 4 or the Permit Cycle

- Quarterly monitoring of Sector Q parameters has been conducted, and samples were analyzed by a DOH ELCP-certified lab for three quarters of 2018, and the Port is on the lookout for a Qualifying Storm Event to conduct the fourth quarterly examination. Rainfall magnitude was estimated at each discharge sampled.
- During the year 2017, to recover from unfavorable sampling conditions during Years 2 and 4 of the permit, monitoring was again attempted. A qualifying rain event was not observed during work hours. Auto-samplers were procured at the beginning of 2018 that collect samples during qualifying rain events which take place after hours, and stores them for preservation the morning after, and on to laboratory analysis of Sector Q parameters.
- During the year 2016, year 4 of the permit, a qualifying rain event was only observed during work hours for the second quarter; monitoring for Sector Q parameters was conducted, and samples were analyzed by a DOH ELCP-certified lab.

- During the year 2014, year 4 of the permit, qualifying rain events during business hours allowed monitoring for Sector Q parameters during two quarters only.

4.8. Reporting: Years 2 and 4 of the Permit Cycle

- Reports for the first three quarters of 2018 are on file, and those results will be averaged with the fourth quarterly Discharge Monitoring Reports (DMR), once available; an annual DMR will summarize monitoring for 2018, which will be submitted by March 31st, 2019 via the FDEP's online EzDMR.
- Year 5 of the permit (2017) DMR reports were submitted with no samples collected due to an absence of a qualifying rain event during business hours. Auto-samplers were procured at the beginning of 2018 that collect samples during qualifying rain events which take place after hours.
- Year 4 (2016) DMR reports were submitted with samples collected for two quarters only due to an absence of a qualifying rain events during business hours for the other two quarters.
- Year 2 (2014) DMR reports were submitted with no samples collected due to an absence of a qualifying rain event during business hours.

4.9. Inventory Materials Exposed to Precipitation

Significant materials that could potentially be exposed to precipitation at the Facility must be inventoried every five years, such as the following: engine oil, hydraulic oil, petroleum products, cement material, various metals, used tires, and waste.

- Engine oil, hydraulic oil, and petroleum products are individually containerized for various projects and tenants. There is a total storage capacity of approximately 40,048 gallons of fuel, 34,048 gallons of diesel and 6,000 gallons of gasoline, for emergency power generators and vehicle fueling throughout the Port. These seventeen storage tanks are individually permitted by the County or the State, based on a capacity threshold.
- Cement material. This is loaded and unloaded at the Port in silos for distribution by two port tenants. The total movement of cement material in the twelve months preceding this report was 655,164 short tons.
- Various metals, such as steel rebar and wire, and other metals used for construction, such as galvanized steel panels, are stored in the Port yards by our tenants.
- Used tires, and waste. The Port requires its tenants to not store wastes within the facility. The Port conducts at least weekly collection of metals, cardboard and paper for its recycling program, and of yard waste for its composting program.
- Bauxite is unloaded at Berth 5 during certain times of the year. In 2018, the total movement of bauxite was 111,337 short tons. The Stevedore has specific requirements, such as: requirement to

have a sweeper, to wet their load, to send samples for chemical analysis, and to plug the Berth scuppers. The material itself has restrictions, such as no red bauxite allowed, and a limited concentration of fines allowed. The Harbormaster monitors compliance with these requirements.

There is no treatment or disposal of wastes on the Port premises.

Materials management practices employed to minimize contact include:

- The majority of forklift and vehicle maintenance activities are conducted inside garages and most significant materials are stored inside or under cover.
- Areas where Facility activities occur outside are paved or required to be cleaned as needed.
- Fuel in above-ground storage tanks is in secondary containment, and fuel in drums have spill kits nearby.
- All drums are sealed with lids and stored inside or under covered areas to prevent contact with stormwater runoff.
- The unloading of refined petroleum products at berths 7, 9, and 13 is conducted at permanent off-loading stations equipped with a covered secondary containment.
- BMPs are in place to reduce the potential for petroleum from off-site sources contacting stormwater.
- Grey waters are offloaded from ships only by licensed contractors and delivered to one of several lift stations designed to accept trucked wastewaters within the Port.

The Port's stormwater system consists of a network of drop inlets with sediment traps, pipes, exfiltration trenches, retention swales, retention ponds, and pipes to outfalls. The sediment traps, exfiltration trenches and retention swales consist of structural and nonstructural control measures to reduce pollutants in stormwater runoff. At the time of this report, the Port was in the process of updating its GIS database for the stormwater system to have a complete picture of the treatment the storm water receives.

4.10. Conduct Outfall Visual Examination

The Outfall Visual Examination and Certification of Non-Stormwater Discharge, required every five years, is included as Appendix B. It includes examination dates, times and personnel, visual quality of the storm water discharge, and probable sources of any observed storm water contamination.

5. Summary of Non-Compliance

Following are the items found to be in non-compliance with the NPDES MSGP. These items have been reviewed with the Port administration, and corrective actions have been suggested.

- a. Quarterly chemical analysis results exceed the benchmark values for iron and zinc in 42% of the samples.
- b. There are apparently no routine inspections of designated equipment and storage areas, a checklist for the inspections has not been developed, there is no system for tracking follow-up to corrective actions, and a centralized location for collection of the inspection reports was not observed.
- c. Employee Training was not apparently conducted during the years 2014 through 2016.
- d. An annual Comprehensive Site Evaluation was apparently not conducted for the years 2014 through 2017.

6. Recommendations

Based in the findings of this investigation, the following corrective actions have been suggested.

- a. Undertake a program of routine vacuum-cleaning of the SWS sumps located under drop-inlets and manholes. There are approximately 921 catch basins and 475 manholes in the PEV database. Doing 8 cleanups per day it will take approximately 174 work days, or approximately 67% of the year, to clean all the PEV traps.
- b. Based on the Port's KLEIN database, prepare monthly reports of significant spills and leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation.
- c. Begin a program of monthly inspections for designated equipment and storage areas using a checklist.
- d. Use autosamplers quarterly to visually examine and report on the effluent quality.
- e. Continue scheduling annual Employee Training events.
- f. Establish a system for tracking the follow-up corrective actions to deficiencies noted during inspections, and to insure that permit-required activities are conducted as specified.

7. Personnel

Qualifications: This report's preparer, Francisco J. Pérez, has conducted environmental regulatory compliance inspections for construction projects, has assisted with the Broward County Surface Water Management License renewals, and has assisted with the preparation of Employee Training materials since August 2016 for Port Everglades. He holds a B.S. in Marine Biology, an M.S. in Environmental Management, and is a Registered Environmental Manager in good standing from the National Register of Environmental Professionals.

8. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

John Foglesong
Director
Seaport Engineering and Facilities Maintenance



Francisco J. Pérez, REM
Preparer

Appendices

Appendix A. Stormwater Drop-Inlet Inspection

Appendix A Field Data, Drop Inlet Inspections

Randomly Selected						
Inlet Number	Date/Time	Condition	Depth of Sediment & Comments	% Pipe Obstruction	Recommendations	SedDepth
153	9/10/18 9:17	Good	10"	0%	2 PVC lines 10" and 5"	10
373	9/10/18 10:06	Good	18" Unable to confirm bottom/sediment depth due to overall depth	0% in line running west (50% water)		18
1163	9/10/18 12:48	Good	24"	Submerged, could not assess. Did not appear obstructed		24
1188	9/10/18 11:05	Good	Trace sediment	0%		0.5
1495	9/10/18 13:08	Good	1/2" Covers over lines			18
2045	9/10/18 13:33	Good	13"	Submerged		13
2272	9/11/18 9:05	Good	28" gravelly 26" water	?	Remove sediment and trash accumulation in surface. Same design as 3048	28
2280	9/11/18 9:35	Good	18" very soft, silty	? Can't see pipes	Remove sediments	18
2523	9/10/18 9:48	Good	7"	Smaller line - 50% (water) Larger Line - 0%		7
2533	9/10/18 9:38	Good	12", slight sheen, 1 line	5%		12
2640	9/11/18 10:50	Good	2" sediment 46" water	?	Baffles take water from bottom	2
2657	9/11/18 10:32	Good	0" sediment 38" water	?		0
2680	9/11/18 10:10	Good	8" sediment 2" water	0%	6" free under pipe	8
2745	9/10/18 14:15	Good	2" Water at 25%	No, approximately 3" clearance		18
2838	9/10/18 10:26	Good	Trace sediment Slight sheen, 2 lines	Water at 50%		0.5
2867	5/30/18 9:20	Fair	>12" cemented sediment	15% of the N, 40% of the W, and 50% of the S	Cracks in the surrounding concrete. Remove sediments.	14.0
3048	9/11/18 8:35	Good	2' gravelly, 18" water	?	Oil Sheen	24
3189	9/10/18 9:07	Good	Full of water, no sediment felt			0

Appendix B. Outfall Visual Examination and Certification of Non- Stormwater Discharge

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