Generalized Instructions
Preparation of Storm Water Pollution Prevention Plan (SWPPP)
(January 1994 except as modified April 2000)

Contents

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Preface

A Storm Water Pollution Prevention Plan (SWPPP) shall be developed for this facility. The Storm Water Pollution Prevention Plan shall be prepared in accordance with good engineering practices and in accordance with the factors outlined in 40 Code of Federal Register (CFR) Section 125.3(d)(2) or (3) as appropriate. The plan shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the Storm Water Pollution Prevention Plan required under this part as a condition of this permit.

A. DEADLINES FOR PLAN PREPARATION AND COMPLIANCE

1. The SWPPP for this facility shall be prepared, and except as provided elsewhere in this permit, shall provide for compliance with the terms of the permit and the plan, no later than the date specified in the permit.

2. Upon a showing of good cause, the Regional Administrator (RA) may establish, in writing, a later date for preparation of and compliance with a plan for a storm water discharge associated with industrial activity.

B. SIGNATURE AND PLAN REVIEW

1. The plan shall be signed in accordance with PART II. D.2.Signatory Requirement and be retained on-site at the facility in accordance with PART II.C.1.b. Monitoring and Records of this permit.

2. The permittee shall make plans available upon request to the RA, or authorized representative, or in the case of a storm water discharge associated with industrial activity which discharges through a municipal separate storm sewer system, to the operator of the municipal system.

3. The RA, or authorized representative, may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this Part. Such notification shall identify those provisions of the permit which are not being met by the plan, and identify which

provisions of the plan require modifications in order to meet the minimum requirements of this Part. Within 30 days of such notification from the RA, (or as otherwise provided by the RA), or authorized representative, the permittee shall make the required changes to the plan and shall submit to the RA a written certification that the requested changes have been made.

C. KEEPING PLANS CURRENT

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the United States or if the Storm Water Pollution Prevention Plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified under ATTACHMENT B § D.2.(Description of Potential Pollutant Sources) below, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity. Amendments to the plan may be reviewed by EPA in the same manner as ATTACHMENT B § B.(SIGNATURE AND PLAN REVIEW) above.

D. CONTENTS OF PLAN

The plan shall include, at a minimum, the following items:

1. Pollution Prevention Team The plan shall identify a specific individual or individuals within the facility organization as members of a Storm Water Pollution Prevention Team who are responsible for developing the Storm Water Pollution Prevention Plan and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's Storm Water Pollution Prevention Plan.

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

   a. Drainage

      (1) A site map indicating an outline of the portions of the drainage area of each storm water outfall that are within the facility boundaries, each existing structural control measure to reduce pollutants in storm water runoff, surface water bodies, locations

where significant materials are exposed to precipitation, locations where major spills or leaks identified under ATTACHMENT B § D.2.c.(Spills and Leaks) below, have occurred, and the locations of the following activities where such activities are exposed to precipitation: fueling stations, vehicle and equipment maintenance and/or cleaning areas, loading/unloading areas, locations used for the treatment, storage or disposal of wastes, liquid storage tanks, processing areas and storage areas.

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

b. Inventory of Exposed Materials The plan shall include an inventory of the types of materials handled at the site that potentially may be exposed to precipitation. Such inventory shall include a narrative description of significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of, three years prior to the date of the issuance of this permit and the present; method and location of on-site storage or disposal; materials management practices employed to minimize contact of materials with storm water runoff between the time of, three years prior to the date of the issuance of this permit and the present; the location and description of existing structural and non-structural control measures to reduce pollutants in storm water runoff; and a description of any treatment the storm water receives.

c. Spills and Leaks The plan shall include a list of significant spills and significant leaks of toxic or hazardous pollutants that occurred at areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility after the date of three years prior to the effective date of this permit. Such a list shall be updated as appropriate during the term of the permit.

d. Sampling Data The plan shall include a summary of existing discharge sampling data describing pollutants in storm water discharges from the facility, including a summary of sampling data collected during the term of this permit.

e. Risk Identification and Summary of Potential Pollutant Sources The plan shall include a narrative description of the potential pollutant sources from the following activities: loading and unloading operations; outdoor storage activities; outdoor manufacturing or processing activities; significant dust or particulate generating processes; and on-site waste disposal practices. The description shall specifically list any significant potential source of pollutants at the site and for each potential source, any pollutant or pollutant parameter (e.g. total suspended solids, biochemical oxygen demand, chemical oxygen demand, etc.) of concern shall be identified.

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

a. Good Housekeeping Good housekeeping requires the maintenance of areas, which may contribute pollutants to storm waters discharges, in a clean, orderly manner.

(1) Fugitive Dust Emissions The plan shall describe measures that prevent or minimize fugitive dust emissions from waste ash piles and wood chip storage areas. The permittee shall consider establishing procedures to minimize offsite tracking of waste ash, wood chips and sawdust. To prevent offsite tracking the facility may consider specially designed tires, or washing vehicles in a designated area before they leave the site, and controlling the wash water.

(2) Residue Hauling Vehicles All residue hauling vehicles shall be inspected for proper covering over the load, adequate gate sealing and overall integrity of the body or container. Vehicles without load coverings or adequate gate sealing, or with leaking containers or beds must be repaired as soon as practicable.

(3) Ash Loading Areas Plant procedures shall be established to reduce and/or control the tracking of waste ash or residue from ash loading areas including, where practicable, requirements to clear the ash storage pad/floor and immediately adjacent roadways of spillage, debris and excess water before each loaded vehicle departs.

b. Preventive Maintenance A preventive maintenance program shall involve timely inspection and maintenance of storm water management devices (e.g. cleaning oil/water separators, catch basins) as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters, and ensuring appropriate maintenance of such equipment and systems.

c. Spill Prevention and Response Procedures Areas where potential spills, which can contribute pollutants to storm water discharges, can occur and their accompanying drainage points shall be identified clearly in the Storm Water Pollution Prevention Plan. Where appropriate, specifying material handling procedures, storage requirements, and use of equipment such as diversion valves in the plan should be considered. Procedures for cleaning up spills shall be identified in the plan and made available to the appropriate personnel. The necessary equipment to implement a clean up should be available to personnel.

d. Inspections In addition to or as part of the comprehensive site evaluation required under ATTACHMENT B § D.4.(Comprehensive Site Compliance Evaluation) below, qualified facility personnel shall be identified to inspect designated equipment and areas of the facility at appropriate intervals specified in the plan. A set of tracking or follow-up procedures shall be used to ensure that appropriate actions are taken in response to the inspections. Records of inspection shall be maintained.

e. Employee Training Employee training programs shall inform personnel responsible for implementing activities identified in the Storm Water Pollution Prevention Plan or otherwise responsible for storm water management, at all levels of responsibility, of the components and goals of the Storm Water Pollution Prevention Plan. Training should address topics such as spill response, good housekeeping and material management practices. A pollution prevention plan shall identify periodic dates for such training.

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

g. Non-Storm Water Discharges

(1) The plan shall include a certification that each discharge has been tested or evaluated for the presence of non-storm water discharges. The certification shall include the identification of potential significant sources of non-storm water at the site, a description of the results of any test and/or evaluation for the presence of non-storm water discharges, the evaluation criteria or testing method used, the date of any testing and/or evaluation, and the on-site drainage points that were directly observed during the test. Certifications shall be signed in accordance with PART II.D.2.Signatory Requirement of this permit. Such certification may not be feasible if the facility operating the storm water discharge associated with industrial activity does not have access to an outfall, manhole, or other point of access to the ultimate conduit which receives the discharge. In such cases, the source identification section of the Storm Water Pollution Prevention Plan shall indicate why the certification required by this part was not feasible, along with the identification of potential significant source of non-storm water at the site. The permittee, if unable to provide the certification required by this paragraph, must notify the RA in writing.

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

h. Sediment and Erosion Control The plan shall identify areas which, due to topography, activities, or other factors, have a high potential for significant soil erosion, and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

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

4. Comprehensive Site Compliance Evaluation Qualified personnel shall conduct site compliance evaluations at appropriate intervals specified in the plan, but, except as provided in ATTACHMENT B § D.4.d.(Inactive Mining Including Sand/Gravel and Quarrying) below, in no case less than once a year. Such evaluations shall provide:

   a. Visual Inspection Areas contributing to a storm water discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the terms of the permit or whether additional control measures are needed. Structural storm water management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

   b. Plan Revision Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with ATTACHMENT B § D.2.(Description of Potential Pollutant Sources) above and pollution prevention measures and controls identified in the plan in accordance with ATTACHMENT B § D.3.(Measures and Controls) above shall be revised as appropriate within two weeks of such inspection and shall provide for implementation of any changes to the plan in a timely manner, but in no case more than twelve weeks after the inspection.

c. Inspection Report A report summarizing the scope of the inspection, personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the Storm Water Pollution Prevention Plan, and actions taken in accordance with ATTACHMENT B § D.4.b.(Plan Revision) above shall be made and retained as part of the Storm Water Pollution Prevention Plan for at least one year after coverage under this permit terminates. [**NOTE:** Pursuant to 40 CFR §122.6 conditions of an expired permit continue in force until the effective date of new permit (reissued) or termination notice.] The report shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with the Storm Water Pollution Prevention Plan and this permit. The report shall be signed in accordance with PART II.D.2.Signatory Requirement of this permit.

d. Inactive Mining Including Sand/Gravel and Quarrying Where annual site inspections are shown in the plan to be impractical for inactive mining sites (including those for sand/gravel and quarrying) due to the remote location and inaccessibility of the site, site inspections required under this part shall be conducted at appropriate intervals specified in the plan, but, in no case less than once in three years.

5. Consistency with Other Plans Storm Water Pollution Prevention Plans may reflect requirements 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.

6. Additional Requirements for Storm Water Discharges Associated with Industrial Activity through Municipal Separate Storm Sewer Systems Serving a Population of 100,000 or More

   a. In addition to the applicable requirements of this permit, the permittee must comply with applicable requirements in municipal storm water management programs developed under NPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the discharger (permittee) has been notified of such conditions.

   b. The permittee shall make plans available to the municipal operator of the system upon request.

7. Additional Requirements for Storm Water Discharges Associated with Industrial Activity from Facilities Subject to Emergency Planning and Community Right-to-Know (EPCRA) Section 313 Requirements In addition to the requirements of ATTACHMENT B §§ D.1. through D.4. above and other applicable conditions of this permit, Storm Water Pollution Prevention Plans for facilities subject to reporting requirements under EPCRA Section 313 for chemicals which are classified as `Section 313 water priority chemicals' shall describe and ensure the implementation of practices which are necessary to provide for conformance with the following guidelines:

   a. Minimum Controls In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided. At a minimum, one of the following preventive systems or its equivalent shall be used:

      (1) Curbing, culverting, gutters, sewers or other forms of drainage control to prevent or minimize the potential for storm water run-on to come into contact with significant sources of pollutants; or

      (2) Roofs, covers or other forms of appropriate protection to prevent storage piles from exposure to storm water, and wind.

   b. Additional Considerations In addition to the minimum standards listed above, the Storm Water Pollution Prevention Plan shall include a complete discussion of measures taken to conform with the following applicable guidelines, other effective storm water pollution prevention procedures, and applicable State rules, regulations and guidelines:

      (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.

         (a) No tank or container shall be used for the storage of a Section 313 water priority chemical unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

         (b) Liquid storage areas for Section 313 water priority chemicals shall 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.

(2) Material storage areas for Section 313 water priority chemicals other than liquids - Material storage areas for Section 313 water priority chemicals other than liquids which are subject to runoff, leaching, or wind shall incorporate drainage or other control features which will 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 for liquid Section 313 water priority chemicals - Truck and rail car loading and unloading areas for liquid Section 313 water priority chemicals shall be operated to minimize discharges of Section 313 water priority chemicals. Protection such as overhangs or door skirts to enclose trailer ends at truck loading/unloading docks shall be provided as appropriate. 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) for use when making and breaking hose connections; a strong spill contingency and integrity testing plan; and/or other equivalent measures.

(4) Areas where Section 313 water priority chemicals are transferred, processed or otherwise handled - Processing equipment and materials handling equipment shall be operated so as to minimize discharges of Section 313 water priority chemicals. Materials used in piping and other handling equipment shall be compatible with the substances handled. Drainage from process and materials handling areas shall 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 from causing a discharge of Section 313 water priority chemicals to the drainage system shall be provided as appropriate. Visual inspections or leak tests shall be provided for overhead piping conveying Section 313 water priority chemicals without secondary containment.

(5) Discharges from areas covered by paragraphs 7.b.(1), (2), (3) or (4) above.

(a) Drainage from areas covered by paragraphs 7.b.(1), (2), (3) or (4) of this part should be restrained by values 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 shall be manually activated.

(b) Flapper-type drain valves shall not be used to drain containment areas. Valves used for the drainage of containment areas should, as far as is practical, be of manual, open-and-closed design.

(c) If facility drainage is not engineered as above, the final discharge of all in-facility storm sewers shall 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 to the facility.

(d) Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment areas.

(6) Facility site runoff other than from areas covered by 7.b.(1), (2), (3) or (4) - Other areas of the facility [those not addressed in paragraphs 7.b.(1), (2), (3) or (4) above], from which runoff which may contain Section 313 water priority chemicals or spills of Section 313 water priority chemicals could cause a discharge shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

(7) Preventive maintenance and housekeeping - All areas of the facility shall be inspected at specific intervals identified in the plan for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of storm water with raw materials, intermediate materials, waste materials or products. In particular, facility piping, pumps, storage tanks and bins, pressure vessels, process and material handling equipment, and material bulk storage areas shall be examined for any conditions or failures which could cause a discharge. Inspection shall

include examination for leaks, wind blowing, corrosion, support or foundation failure, or other forms of deterioration or non-containment. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Different areas may require different inspection intervals. Where a leak or other condition is discovered which may result in significant releases of Section 313 water priority chemicals to waters of the United States, action to stop the leak or otherwise prevent the significant release of Section 313 water priority chemicals to waters of the United States shall be immediately taken or the unit or process shut down until such action can be taken. When a leak or non-containment of a Section 313 water priority chemical has occurred, contaminated soil, debris, or other material must be promptly removed and disposed in accordance with Federal, State, and local requirements and as described in the plan.

(8) Facility security - Facilities shall have the necessary security systems to prevent accidental or intentional entry which could cause a discharge. Security systems described in the plan shall address fencing, lighting, vehicular traffic control, and securing of equipment and buildings.

(9) Training - Facility employees and contractor personnel that work in areas where Section 313 water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility. Employee training shall be conducted at intervals specified in the plan, but not less than once per year, in matters of pollution control laws and regulations, and in the Storm Water Pollution Prevention Plan and the particular features of the facility and its operation which are designed to minimize discharges of Section 313 water priority chemicals. The plan shall designate a person who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements so that spills and emergency releases of Section 313 water priority chemicals can be isolated and contained before a discharge of a Section 313 water priority chemical can occur. Contractor or temporary personnel shall be informed of facility operation and design features in order to prevent discharges or spills from occurring.

(10) Engineering certification - The Storm Water Pollution Prevention Plan for a facility subject to EPCRA Section 313 requirements for chemicals which are classified as 'Section 313 water priority chemicals' shall be reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. A Registered Professional Engineer shall recertify the plan every three years thereafter or as soon as practicable after any significant modification is made to the facility. By means of these certifications, the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the Storm Water Pollution Prevention Plan has been prepared in accordance with good engineering practices. Such certifications shall in no way relieve the owner or operator of a facility covered by the plan of their duty to prepare and fully implement such plan.

8. Additional Requirements for Salt Storage Storage piles of salt used for deicing or other commercial or industrial purposes and which generate a storm water discharge associated with industrial activity which is discharged to a waters of the United States shall be enclosed or covered to prevent exposure to precipitation, except for exposure resulting from adding or removing materials from the pile. The permittee shall demonstrate compliance with this provision as expeditiously as practicable, but in no event later than October 1, 1995. Piles do not need to be enclosed or covered where storm water runoff from the pile is not discharged to waters of the United States.

As of: 5/94

Pollutant Bench Mark Values

Pollutant Name

Bench Mark Level	Source	
9 mg/L	7	Biological Oxygen Demand(5)
65 mg/L	7	Chemical Oxygen Demand
100 mg/L	7	Total Suspended Solids
105 mg/L	7	Total Kjeldahl Nitrogen
0.68 mg/L	7	Nitrate + Nitrite Nitrogen
0.33 mg/L	7	Total Phosphorus
6.5-9 s.u.	8	pH
3.1 mg/L	3	1,1,1-Trichloroethane
7.55 mg/L	2	Acrylonitrile (c)
0.75 mg/L	1	Aluminum, Total (pH 6.5-9)
19 mg/L	1	Ammonia (as Nitrogen, un-ionized)
0.088 mg/L	1	Antimony, Total
0.000018 mg/L	3	Arsenic, Total (c)
1.0 mg/L	4	Barium, Total
5.3 mg/L	2	Benzene (c,s)
0.13 mg/L	2	Beryllium, Total (c)

3 mg/L	3	Butylbenzyl Phthalate
0.0018 mg/L	1	Cadmium, Total (H)
860 mg/L	1	Chloride
0.009 mg/L	1	Copper, Total (H)
313 mg/L	3	Dimethyl Phthalate
32 mg/L	2	Ethylbenzene
3.98 mg/L	2	Fluoranthene
0.3 mg/L	3	Iron, Total
0.0337 mg/L	1	Lead, Total (H)
0.05 mg/L	3	Manganese
0.0024 mg/L	1	Mercury, Total
0.0047 mg/L	3	Methylene Chloride
2.3 mg/L	2	Naphthalene
0.7884 mg/L	1	Nickel, Total (H)
0.00000044 mg/L	3	PCB-1016 (c)
0.00000044 mg/L	3	PCB-1221 (c)
0.00000044 mg/L	3	PCB-1232 (c)
0.00000044 mg/L	3	PCB-1242 (c)
0.00000044 mg/L	3	PCB-1248 (c)
0.00000044 mg/L	3	PCB-1254 (c)
0.00000044 mg/L	3	PCB-1260 (c)
0.03 mg/L	1	Phenanthrene (PAH,c)
10.2 mg/L	2	Phenols, Total
0.0000028 mg/L	3	Pyrene (PAH,c)
0.02 mg/L	1	Selenium, Total
0.0009 mg/L	1	Silver, Total (H)
17.5 mg/L	2	Toluene
45 mg/L	2	Trichloroethylene (c)

0.065 mg/L	1	Zinc, Total (H)

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. "EPA Recommended Ambient Water Quality Criteria." Human Health Criteria for Consumption of Organisms Only
5. "EPA Recommended Ambient Water Quality Criteria." Acute Aquatic Life Marine
6. "EPA Recommended Ambient Water Quality Criteria." LOEL Acute Marine
7. NURP
8. "EPA Recommended Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater

NA. Bench mark value was not available.

Notes:
(c) carcinogen
(H) hardness dependent
(PAH) Polynuclear Aromatic Hydrocarbon
(s) Displayed standard is for Total Aromatic Hydrocarbons, which supersedes the criteria for Benzene.
(y) Storm water effluent limitations guidelines are not appropriate.

Assumptions:
Receiving water temperature - 20 C
Receiving water pH - 7
Receiving water hardness mg/L CaCO3 - 50
Receiving water salinity g/kg - 20
Acute to Chronic Ratio (ACR) - 10

Attachment D

The following documents provide guidance and information concerning the storm water program and storm water permitting

Federal Register Notices/Rulemaking

- **November 16, 1990 Federal Register (55 FR 47990):** Defines storm water discharges associates with industrial activity and the application requirements for NPDES storm water discharges.

- **August 16, 1991 Federal Register (56 FR 40948):** Draft General Permit for storm water discharges associated with industrial activities. Also included proposed storm water implementation rule package.

- **April 2, 1992 Federal Register (57 FR 11394):** Application deadlines final rule, codification of the Highway Transportation Act (ISTEA) (which clarified which activities were subject to permitting for municipalities with populations $\leq$ 100,000), monitoring and reporting requirements for storm water discharges, and general permit requirements.

- **September 9, 1992 Federal Register (57 FR 41176):** General Permit for storm water discharges from construction sites for ME and NH.

- **September 9, 1992 Federal Register (57 FR 41236):** General Permit for storm water discharges from industrial activities for ME and NH.

- **September 25, 1992 Federal Register (57 FR 44412):** General Permit for storm water discharges from construction sites for MA.

- **September 25, 1992 Federal Register (57 FR 44438):** General Permit for storm water discharges from industrial activities for MA.

- **December 18, 1992 Federal Register (57 FR 60444):** Clarifies application, permit issuance and compliance deadlines. Establishes that permits must be issued or denied within one year of complete application. Identifies that the Agency must undergo further rulemaking concerning construction activities and light industry, but the rules stand until that time.

- **November 19, 1993 Federal Register (58 FR 61146):** Proposed Multi-Sector General Permit for Storm Water Discharges Associated With Industrial Activity. Responds to Group application process. Does not cover construction activities.

Attachment D

Guidance Documents

- **Guidance Manual for the Preparation of NPDES permit Applications for Storm Water Discharges Associated with Industrial Activity** (EPA-505/8-91-002, April 1991)

- **Investigations of Inappropriate Pollutant Entries into Storm Drainage Systems, A User's Guide** (EPA/600/R-92/238, January 1993)

- **Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices** (EPA/832/R-92/006, September 1992)

- **Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices** (EPA/832/R-92/005, September 1992)

- **Summary: Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices** (October 1992)

- **Summary: Storm Water Management for Construction Activities, Developing Pollution Prevention Plans and Best Management Practices** (October 1992)

- **Handbook: Urban Runoff Pollution Prevention and Control Planning** (EPA/625/R-93/004 September 1993)

Program Summaries

- **Overview of the Storm Water Program** (October 1993)

- **Question and Answer Document** (March 1992)

- **Question and Answer Document, Volume II** (July 1993)