

## **Part 4 - Sector-Specific Requirements**

You only need to comply with the additional requirements of this section that apply to the sector(s) of industrial activity at your facility. These sector specific requirements are in addition to the basic requirements specified in Part 2 and Part 3 of this permit.

### **Subsection A - Sector A - Timber Products.**

#### **A.1 Covered Stormwater Discharges.**

The requirements in Subsection A apply to stormwater discharges associated with industrial activity from timber products facilities as identified by the SIC Codes specified under Sector A in Table D-1 of Appendix D of the permit.

#### **A.2 Industrial Activities Covered by Sector A.**

The types of activities that permittees under Sector A are primarily engaged in are:

- A.2.1 cutting timber and pulpwood (those that have log storage or handling areas);
- A.2.2 mills, including merchant, lath, shingle, cooperage stock, planing, plywood, and veneer;
- A.2.3 producing lumber and wood basic materials;
- A.2.4 wood preserving;
- A.2.5 manufacturing finished articles made entirely of wood or related materials except wood kitchen cabinet manufacturers (covered under Appendix W); and
- A.2.6 manufacturing wood buildings or mobile homes.

#### **A.3 Limitation on Coverage**

- A.3.1 Prohibition of Discharges. (See also Part 1.3.4) Not covered by this permit: stormwater discharges from areas where there may be contact with the chemical formulations sprayed to provide surface protection. These discharges must be covered by a separate NPDES permit.
- A.3.2 Authorized Non-Stormwater Discharges. (See also Part 1.3.3) Also authorized by this permit, provided the non-stormwater component of the discharge is in compliance with SWPPP requirements in Part 2.1.5 (Stormwater Controls): discharges from the spray down of lumber and wood product storage yards where no chemical additives are used in the spray-down waters and no chemicals are applied to the wood during storage.

#### A.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- A.4.1 *Drainage Area Site Map.* (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.
- A.4.2 *Inventory of Exposed Materials.* (See also Part 2.1.5.2) Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, identify the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with stormwater runoff.
- A.4.3 *Description of Stormwater Management Controls.* (See also Part 2.1.5) Describe and implement measures to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If your facility performs wood surface protection and preservation activities, address the specific BMPs for these activities.
- A.4.4 *Good Housekeeping.* (See also Part 2.1.5.1) In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to limit the discharge of wood debris, minimize the leachate generated from decaying wood materials, and minimize the generation of dust.
- A.4.5 *Inspections.* (See also Part 2.1.5.6) If your facility performs wood surface protection and preservation activities, inspect processing areas, transport areas, and treated wood storage areas monthly to assess the usefulness of practices to minimize the deposit of treatment chemicals on unprotected soils and in areas that will come in contact with stormwater discharges.

#### A.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)

<b>Table A-1. Sector-specific Numeric Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
General Sawmills and Planing Mills	Chemical Oxygen Demand (COD)	120.0 mg/L	--

(SIC 2421)	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Zinc <sup>3</sup>	0.12 mg/L	--
Wood Preserving (SIC 2491)	Total Recoverable Arsenic	0.15 mg/L	--
	Total Recoverable Copper <sup>4</sup>	0.014 mg/L	--
	Total Recoverable Chromium <sup>5</sup>	1.8 mg/L	--
	Phenols	0.016 mg/L <sup>6</sup>	--
	Total Suspended Solids (TSS)	100 mg/L	--
Log Storage and Handling (SIC 2411)	Total Suspended Solids (TSS)	100 mg/L	--
Wet Decking Discharges at Log Storage and Handling Areas (SIC 2411)	pH	--	6.0 - 9.0 s.u
	Total Suspended Solids (TSS)	100.0 mg/L	--
	Debris (woody material such as bark, twigs, branches, heartwood, or sapwood)	--	No discharge of debris that will not pass through a 2.54-cm (1-in.) diameter round opening
Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood, and Structural Wood; Wood Containers; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC 2426, 2429, 2431-2439 (except 2434), 2448, 2449, 2451, 2452, 2493, and 2499)	Chemical Oxygen Demand (COD)	120.0 mg/L	--
	Total Suspended Solids (TSS)	100.0 mg/L	--
Nailed Wood Boxes and Shook (SIC 2441)	Total Suspended Solids (TSS)	100.0 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Monitor once per year for each monitoring year.

<sup>3</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The

value given in Table A-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

<sup>4</sup> The benchmark value of copper is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table A-1 (i.e. 0.014 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for copper:

$$\text{Benchmark} = (e^{[(0.9422)(\ln \text{hardness}) - 1.700]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.9422)(\ln 175) - 1.700]})/1000 \\ &= (e^{3.166})/1000 \\ &= 23.72/1000 \\ &= 0.024 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for copper:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.014
125	0.017

150	0.021
175	0.024
200	0.027
225	0.030
250	0.033

<sup>5</sup> The benchmark value of chromium is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table A-1 (i.e. 1.8 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for chromium:

$$\text{Benchmark} = (e^{[(0.8190)(\ln \text{hardness}) + 3.7256]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8190)(\ln 175) + 3.7256]})/1000 \\ &= (e^{7.96})/1000 \\ &= 2851.4/1000 \\ &= 2.9 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for chromium:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	1.8
125	2.2
150	2.5
175	2.9
200	3.2
225	3.5
250	3.8

<sup>6</sup>Benchmark cutoff concentration for phenols based on ML for the reference method times 3.18.

## **Subsection B - Sector B - Paper and Allied Products Manufacturing.**

### **B.1 Covered Stormwater Discharges.**

The requirements in Subsection B apply to stormwater discharges associated with industrial activity from paper and allied products manufacturing facilities, as identified by the SIC Codes specified under Sector B in Table D-1 of Appendix D of the permit.

### **B.2 Industrial Activities Covered by Sector B.**

Permittees under Sector B are primarily engaged in the following types of activities

- B.2.1 manufacture of pulps from wood and other cellulose fibers and from rags;
- B.2.2 manufacture of paper and paperboard into converted products (e.g., paper coated off the paper machine, paper bags, paper boxes, paper envelopes) and
- B.2.3 manufacture of bags of plastic film and sheet.

**B.3 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table B-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Paperboard Mills (SIC Code 2631)	Total Suspended Solids (TSS)	100 mg/L	--
	Chemical Oxygen Demand (COD)	120 mg/L	--
Pulp Mills; Paper Mills; Paperboard Containers and Boxes; and Converted Paper and Paperboard Products, except Containers and Boxes (SIC 2611, 2621, 2652-2657, 2671-2679)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection C - Sector C - Chemical and Allied Products Manufacturing.**

**C.1 Covered Stormwater Discharges.**

The requirements in Subsection C of Attachment 1 apply to stormwater discharges associated with industrial activity from Chemical and Allied Products Manufacturing facilities, as identified by the SIC Codes specified under Sector C in Table D-1 of Appendix D of the permit.

**C.2 Industrial Activities Covered by Sector C.**

The requirements listed under this Part apply to stormwater discharges associated with industrial activity from a facility engaged in manufacturing the following products

- C.2.1 basic industrial inorganic chemicals;
- C.2.2 plastic materials and synthetic resins, synthetic rubbers, and cellulosic and other human-

made fibers, except glass;

- C.2.3 soap and other detergents, including facilities producing glycerin from vegetable and animal fats and oils; specialty cleaning, polishing, and sanitation preparations; surface active preparations used as emulsifiers, wetting agents, and finishing agents, including sulfonated oils; and perfumes, cosmetics, and other toilet preparations;
- C.2.4 paints (in paste and ready-mixed form); varnishes; lacquers; enamels and shellac; putties, wood fillers, and sealers; paint and varnish removers; paint brush cleaners; and allied paint producers;
- C.2.5 industrial organic chemicals;
- C.2.6 industrial and household adhesives, glues, caulking compounds, sealants, and linoleum, tile, and rubber cements from vegetable, animal, or synthetic plastic materials; explosives; printing ink, including gravure, screen process, and lithographic inks; miscellaneous chemical preparations such as fatty acids, essential oils, gelatin (except vegetable), sizes, bluing, laundry soaps, writing and stamp pad ink, industrial compounds such as boiler and heat insulating compounds, and chemical supplies for foundries;
- C.2.7 ink and paints, including china painting enamels, India ink (a type of drawing ink), platinum paints for burnt wood or leather work, paints for china painting, artist's paints and water colors; and
- C.2.8 nitrogenous and phosphatic basic fertilizers, mixed fertilizers, pesticides, and other agricultural chemicals.

### **C.3 Limitations on Coverage.**

- C.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) The following are not covered by this permit: non-stormwater discharges containing inks, paints, or substances (hazardous, non-hazardous, etc.) resulting from an onsite spill, including materials collected in drip pans; washwater from material handling and processing areas; and washwater from drum, tank, or container rinsing and cleaning.

### **C.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- C.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: processing and storage areas; access roads, rail cars, and tracks; areas where substances are transferred in bulk; and operating machinery.

- C.4.2 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following sources and activities that have potential pollutants associated with them: loading, unloading, and transfer of chemicals; outdoor storage of salt, pallets, coal, drums, containers, fuels, and fueling stations; vehicle and equipment maintenance and cleaning areas; areas where the treatment, storage, or disposal (on- or off-site) of waste and wastewater occur; storage tanks and other containers; processing and storage areas; access roads, rail cars, and tracks; areas where the transfer of substances in bulk occurs; and areas where machinery operates.
- C.4.3 Good Housekeeping Measures. (See also Part 2.1.5.1) As part of your good housekeeping program, include a schedule for regular pickup and disposal of garbage and waste materials, or adopt other appropriate measures to reduce the potential for discharging stormwater that has contacted garbage or waste materials. Routinely inspect the condition of drums, tanks, and containers for potential leaks.

**C.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table C-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
Phosphate Subcategory of the Fertilizer Manufacturing Point Source Category (40 CFR §418.10) - applies to precipitation runoff that, during manufacturing or processing, comes into contact with any raw materials, intermediate product, finished product, by-products, or waste product (SIC 2874)	Total Phosphorus (as P)	--	105.0 mg/L, daily maximum
			35 mg/L, 30-day avg.
	Fluoride	--	75.0 mg/L, daily maximum
			25.0 mg/L, 30-day avg.
	Total Suspended Solids (TSS)	100 mg/L	--
Agricultural Chemicals (SIC 2873-2879)	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
	Total Recoverable Lead <sup>3</sup>	0.082 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Zinc <sup>4</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Phosphorus	2.0 mg/L	--
Industrial Inorganic Chemicals (SIC 2812-2819)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Zinc <sup>4</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
	Total Recoverable Zinc <sup>4</sup>	0.12 mg/L	--

<b>Table C-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
	Total Suspended Solids (TSS)	100 mg/L	--
Plastics, Synthetics, and Resins (SIC 2821-2824)	Total Recoverable Zinc <sup>4</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances, Biological Products (except Diagnostic Substances); Paints, Varnishes, Lacquers, Enamels, and Allied Products; Industrial Organic Chemicals; Miscellaneous Chemical Products; and Inks and Paints, including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors (SIC 2833-2836, 2851, 2861-2869, 2891-2899, 3952 (limited to list))	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Monitor once per year for each monitoring year.

<sup>3</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table C-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

The following are example benchmark value for lead:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23
250	0.26

<sup>4</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table C-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

The following are example benchmark values for zinc:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

## **Subsection D - Sector D - Asphalt Paving and Roofing Materials and Lubricant Manufacturing.**

### **D.1 Covered Stormwater Discharges.**

The requirements in Subsection D of Attachment 1 apply to stormwater discharges

associated with industrial activity from asphalt paving and roofing materials and lubricant manufacturing facilities, as identified by the SIC Codes specified under Sector D in Table D-1 of Appendix D of the permit.

## **D.2 Industrial Activities Covered by Sector D.**

Permittees under Sector D are primarily engaged in the following types of activities:

D.2.1 manufacturing asphalt paving and roofing materials;

D.2.2 portable asphalt plant facilities; and

D.2.3 manufacturing lubricating oils and greases.

## **D.3 Limitations on Coverage.**

The following stormwater discharges associated with industrial activity are not authorized by this permit

D.3.1 discharges from petroleum refining facilities, including those that manufacture asphalt or asphalt products that are classified as SIC Code 2911; or

D.3.2 discharges from oil recycling facilities; or

D.3.3 discharges associated with fats and oils rendering.

## **D.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

D.4.1 Inspections. (See also Part 2.1.5.6) Inspect at least once per month, as part of the maintenance program, the following areas: material storage and handling areas; liquid storage tanks, hoppers, and silos; vehicle and equipment maintenance, cleaning, and fueling areas; and material handling vehicles, equipment, and processing areas. Ensure that appropriate action is taken in response to the inspection by implementing tracking or follow-up procedures.

## **D.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table D-1. Sector-specific Numeric Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
Asphalt Paving and Roofing Materials (SIC 2951, 2952)	Total Suspended Solids (TSS)	100 mg/L	--
Discharges from Areas Where Production of Asphalt Paving and Roofing Emulsions Occurs (SIC 2951, 2952)	Total Suspended Solids (TSS)	--	23.0 mg/L, daily maximum
			15.0 mg/L, 30-day avg.
	pH	--	6.0 - 9.0 s.u.
	Oil and Grease	--	15.0 mg/L, daily maximum
10 mg/L, 30-day avg.			
Miscellaneous Products of Petroleum and Coal (SIC 2992, 2999)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Monitor once per year for each monitoring year.

## **Subsection E - Sector E - Glass, Clay, Cement, Concrete, and Gypsum Products.**

### **E.1 Covered Stormwater Discharges.**

The requirements in Subsection E of Attachment 1 apply to stormwater discharges associated with industrial activity from glass, clay, cement, concrete, and gypsum products facilities, as identified by the SIC Codes specified under Sector E in Table D-1 of Appendix D of the permit.

### **E.2 Industrial Activities Covered by Sector E.**

The requirements listed under this permit apply to stormwater discharges associated with industrial activity from a facility engaged in either manufacturing the following products or performing the following activities

E.2.1 flat, pressed, or blown glass or glass containers;

- E.2.2 hydraulic cement;
- E.2.3 clay products, including tile and brick;
- E.2.4 pottery and porcelain electrical supplies;
- E.2.5 concrete products;
- E.2.6 gypsum products;
- E.2.7 minerals and earths, ground or otherwise treated;
- E.2.8 non-clay refractories;
- E.2.9 lime manufacturing;
- E.2.10 cut stone and stone products;
- E.2.11 asbestos products; and
- E.2.12 mineral wool and mineral wool insulation products.

### **E.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- E.3.1 Drainage Area Site Map. (See also Part 2.1.2) Identify the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.
- E.3.2 Good Housekeeping Measures. (See also Part 2.1.5.1) With good housekeeping, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in stormwater from paved portions of the site that are exposed to stormwater. Consider sweeping regularly or using other equivalent measures to minimize the presence of these materials. Indicate in your SWPPP the frequency of sweeping or equivalent measures. Determine the frequency from the amount of industrial activity occurring in the area and the frequency of precipitation, but it must be performed at least once a week if cement, aggregate, kiln dust, fly ash, or settled dust are being handled or processed. You must also prevent the exposure of fine granular solids (cement, fly ash, kiln dust, etc.) to stormwater, where practicable, by storing these materials in enclosed silos, hoppers, or buildings, or under other covering.

- E.3.3 Inspections. (See also Part 2.1.5.6) Perform inspections while the facility is in operation and include all of the following areas exposed to stormwater: material handling areas; above-ground storage tanks, hoppers, or silos; dust collection and containment systems; and truck wash down and equipment cleaning areas.
- E.3.4 Certification. (See also Part 2.1.4.4) For facilities producing ready-mix concrete, concrete block, brick, or similar products, include in the non-stormwater discharge certification a description of measures that ensure that process waste water resulting from washing trucks, mixers, transport buckets, forms, or other equipment are discharged in accordance with NPDES requirements or are recycled.

**E.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table E-1. Sector-specific Numeric Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Cutoff Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
Clay Product Manufacturers (SIC 3251-3259, 3261-3269)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Concrete and Gypsum Product Manufacturers (SIC 3271-3275)	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
Cement Manufacturing Facility, Material Storage Runoff: Any discharge composed of runoff that derives from the storage of materials, including raw materials, intermediate products, finished products, and waste materials that are used in or derived from the manufacture of cement.	Total Suspended Solids (TSS)	--	50 mg/L, daily maximum
	pH	--	6.0 - 9.0 s.u.
Flat Glass; Glass and Glassware, Pressed or Blown; Glass Products Made of Purchased Glass; Hydraulic Cement; Cut Stone and Stone Products; and Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products (SIC 3211, 3221, 3229, 3231, 3241, 3281, 3291-3299)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Monitor once per year for each monitoring year.

**Subsection F - Sector F - Primary Metals**

**F.1 Covered Stormwater Discharges.**

The requirements in Subsection F of Attachment 1 apply to stormwater discharges associated with industrial activity from primary metals facilities, as identified by the SIC Codes specified under Sector F in Table D-1 of Appendix D of the permit.

## **F.2 Industrial Activities Covered by Sector F.**

Facilities under Sector F are primarily engaged in the following types of activities

- F.2.1 steel works, blast furnaces, and rolling and finishing mills, including steel wire drawing and steel nails and spikes; cold-rolled steel sheet, strip, and bars; and steel pipes and tubes;
- F.2.2 iron and steel foundries, including gray and ductile iron, malleable iron, steel investment, and steel foundries not elsewhere classified;
- F.2.3 primary smelting and refining of nonferrous metals, including primary smelting and refining of copper, and primary production of aluminum;
- F.2.4 secondary smelting and refining of nonferrous metals;
- F.2.5 rolling, drawing, and extruding of nonferrous metals, including rolling, drawing, and extruding of copper; rolling, drawing, and extruding of nonferrous metals except copper and aluminum; and drawing and insulating of nonferrous wire;
- F.2.6 nonferrous foundries (castings), including aluminum die-casting, nonferrous die-casting except aluminum, aluminum foundries, copper foundries, and nonferrous foundries except copper and aluminum;
- F.2.7 miscellaneous primary metal products, not elsewhere classified, including metal heat treating and primary metal products not elsewhere classified;

Activities covered include but are not limited to stormwater discharges associated with cooking operations, sintering plants, blast furnaces, smelting operations, rolling mills, casting operations, heat treating, extruding, drawing, or forging all types of ferrous and nonferrous metals, scrap, and ore.

## **F.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- F.3.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums;

processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and that could result in a discharge of pollutants to waters of the United States.

- F.3.2 Inventory of Exposed Material. (See also Part 2.1.5.2) Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities are possible.
- F.3.3 Good Housekeeping Measures. (See also Part 2.1.5.1) As part of your good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.
- F.3.4 Inspections. (See also Part 2.1.5.6) Conduct inspections monthly and address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

**F.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table F-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Cutoff Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Iron and Steel Foundries (SIC 3321-3325)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Copper <sup>3</sup>	0.014 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
Rolling, Drawing, and Extruding of Nonferrous Metals (SIC 3351-3357)	Total Recoverable Copper <sup>3</sup>	0.014 mg/L	--
	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Nonferrous Foundries (SIC 3363-3369)	Total Recoverable Copper <sup>3</sup>	0.014 mg/L	--
	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Primary Smelting and Refining of Nonferrous Metals; Secondary Smelting and Refining of Nonferrous Metals; and Miscellaneous Primary Metal Products (SIC 3331-3339, 3341, 3398, 3399)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For

each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table F-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

<sup>3</sup> The benchmark value of copper is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table F-1 (i.e. 0.014 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for copper:

$$\text{Benchmark} = (e^{[(0.9422)(\ln \text{hardness}) - 1.700]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.9422)(\ln 175) - 1.700]})/1000 \\ &= (e^{3.166})/1000 \\ &= 23.72/1000 \\ &= 0.024 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for copper:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.014
125	0.017
150	0.021
175	0.024
200	0.027
225	0.030
250	0.033

## **Subsection G - Sector G - Metal Mining**

### **G.1 Covered Stormwater Discharges.**

The requirements in Subsection G apply to stormwater discharges associated with industrial activity from metal mining facilities, including mines abandoned on Federal lands, as identified by the SIC Codes specified under Sector G in Table D-1 of Appendix D. Coverage is required for metal mining facilities that discharge stormwater contaminated by contact with, or that has come into contact with, any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the operation.

G.1.1 Covered Discharges from Inactive Facilities. All stormwater discharges.

G.1.2 Covered Discharges from Active and Temporarily Inactive Facilities. Only the stormwater discharges from the following areas are covered: waste rock and overburden piles if composed entirely of stormwater and not combining with mine drainage; topsoil piles; offsite haul and access roads; onsite haul and access roads constructed of waste rock, overburden, or spent ore if composed entirely of stormwater and not combining with mine drainage; onsite haul and access roads not constructed of waste rock, overburden, or spent ore except if mine drainage is used for dust control; runoff from tailings dams or dikes when not constructed of waste rock or tailings and no process fluids are present; runoff from tailings dams or dikes when constructed of waste rock or tailings and no process fluids are present, if composed entirely of stormwater and not combining with mine drainage; concentration building if no contact with material piles; mill site if no contact with material piles; office or administrative building and housing if mixed with stormwater from industrial area; chemical storage area; docking facility if no excessive contact with waste product that would otherwise constitute mine drainage; explosive storage; fuel storage; vehicle and equipment maintenance area and building; parking areas (if necessary); power plant; truck wash areas if no excessive contact with waste product that would otherwise constitute mine drainage; unreclaimed, disturbed areas outside of active mining area; reclaimed areas released from reclamation bonds prior to December 17, 1990; and partially or inadequately reclaimed areas or areas not

released from reclamation bonds.

G.1.3 Covered Discharges from Exploration and Development of Metal Mining and/or Ore Dressing Facilities: All stormwater discharges.

G.1.4 Covered Discharges from Facilities at Mining Sites and Undergoing Reclamation. All stormwater discharges.

## **G.2 Industrial Activities Covered by Sector G.**

NOTE: “metal mining” will connote any of the separate activities listed in Part G.2. Permittees under Sector G are primarily engaged in the following types of activities:

G.2.1 exploring for metallic minerals (ores), developing mines, and the mining of ores;

G.2.2 ore dressing and beneficiating, whether performed at collocated, dedicated mills, or at separate (i.e., custom) mills.

G.2.3 reclamation of mining sites.

## **G.3 Limitations on Coverage.**

G.3.1 Prohibition of Stormwater Discharges. Stormwater discharges not authorized by this permit: discharges from active metal mining facilities that are subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

NOTE: Discharges that come in contact with overburden or waste rock are subject to 40 CFR Part 440, providing that the discharges drain to a point source (either naturally or as a result of intentional diversion) and they combine with “mine drainage” that is otherwise regulated under the Part 440 regulations. Discharges from overburden or waste rock can be covered under this permit if they are composed entirely of stormwater, do not combine with sources of mine drainage that are subject to 40 CFR Part 440, and meet other eligibility criteria contained in Part 1.3.2.1.

G.3.2 Prohibition of Non-Stormwater Discharges. Not authorized by this permit: adit drainage and contaminated springs or seeps. Contaminated seeps and springs discharging from waste rock dumps that do not directly result from precipitation events are not authorized by this permit (see also the standard Limitations on Coverage in Part 1.3.4).

## **G.4 Definitions.**

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

- G.4.1 Mining operation - typically consists of three phases, any one of which individually qualifies as a “mining activity.” The phases are the exploration and development phase, the active phase, and the reclamation phase.
- G.4.2 Exploration and Development phase - entails exploration and land disturbance activities to determine the financial viability of a site. Development includes the building of site access roads and removal of overburden and waste rock to expose mineable minerals.
- G.4.3 Active phase - activities including each step from extraction through production of a salable product.
- G.4.4 Reclamation phase - activities intended to return the land to its pre-mining use
- G.4.5 Active metal mining facility - a place where work or other activity related to the extraction, removal, or recovery of metal ore is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun.
- G.4.6 Inactive metal mining facility - a site or portion of a site where metal mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency.
- G.4.7 Temporarily inactive metal mining facility - a site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.
- G.4.8 Final Stabilization - a site or portion of a site is “finally stabilized” when:
- a. All soil disturbing activities at the site have been completed and either of the two following criteria are met:
    - i. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
    - ii. Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
  - b. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ( $0.70 \times 0.50 = 0.35$ ) would require 35 percent total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.

## **G.5 Clearing, Grading, and Excavation Activities.**

Clearing, grading, and excavation activities being conducted as part of the exploration and development phase of a mining operation may be covered under this permit if the clearing, grading, and excavation activities meet the terms and conditions and applicable technical standards of the Construction General Permit 3-9001 or its replacement.

### **G.5.1 Management Practices for Clearing, Grading, and Excavation Activities.**

- G.5.1.1 Selecting and installing control measures. A combination of erosion and sedimentation control measures are required to achieve maximum pollutant prevention and removal. All control measures must be properly selected, installed, and maintained in accordance with any relevant manufacturer specifications and good engineering practices.
- G.5.1.2 Removal of Sediment. If sediment escapes the site, off-site accumulations of sediment must be removed at a frequency sufficient to prevent off-site impacts.
- G.5.1.3 Good Housekeeping. Litter, debris, and chemicals must be prevented from becoming a pollutant source in stormwater discharges.
- G.5.1.4 Velocity Dissipation. Velocity dissipation devices must be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from disturbed areas and from any stormwater retention or detention facilities to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).
- G.5.1.5 Retention and Detention of Stormwater Runoff. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.
- G.5.1.6 Temporary Stabilization of Disturbed Areas. Stabilization measures must be initiated immediately in portions of the site where development activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Until full vegetative stabilization is achieved, interim measures such as blankets and tackifiers must be employed.

## G.5.2 Requirements for Inspection of Clearing, Grading, and Excavation Activities.

- G.5.2.1 **Inspection Frequency.** Inspections must be conducted at least once every 7 calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen).
- G.5.2.2 **Qualified Personnel for Inspections.** Inspections must be conducted by qualified personnel. "Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment control who possesses the skills to assess conditions at the construction site that could impact stormwater quality and the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the clearing, grading, and excavation activities.
- G.5.2.3 **Location of Inspections.** Inspections must include all areas of the site disturbed by clearing, grading, and excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures identified in the SWPPP must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.
- G.5.2.4 **Inspection Reports.** For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include:
- a. The inspection date;
  - b. Names, titles, and qualifications of personnel making the inspection;
  - c. Weather information for the period since the last inspection (or note if it is the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
  - d. Weather information and a description of any discharges occurring at the time of the inspection;
  - e. Location(s) of discharges of sediment or other pollutants from the site;
  - f. Location(s) of BMPs that need to be maintained;
  - g. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
  - h. Location(s) where additional BMPs are needed that did not exist at the time of inspection; and

- i. Corrective action(s) required, including any changes to the SWPPP necessary and implementation dates.

A record of each inspection and of any actions taken in accordance with this Part must be retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports must identify any incidents of non-compliance with the permit conditions. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the clearing, grading, and excavation activities are in compliance with the SWPPP and this permit. The report must be signed in accordance with Subpart 11 of Appendix B.

### G.5.3 Maintenance of Controls for Clearing, Grading, and Excavation Activities

G.5.3.1 Maintenance of BMPs. All erosion and sediment control measures and other protective measures identified in the SWPPP must be maintained in effective operating condition. If site inspections required by Section G.5.2 identify BMPs that are not operating effectively, maintenance must be performed as soon as possible and before the next storm event whenever practicable to maintain the continued effectiveness of stormwater controls.

G.5.3.2 Modification of BMPs. Existing BMPs need to be modified or, if additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as possible.

G.5.3.3 Maintenance of sediment traps and ponds. Sediment from sediment traps or sedimentation ponds must be removed when design capacity has been reduced by 50 percent.

### G.5.4 Requirements for Cessation of Clearing, Grading, and Excavation Activities.

G.5.4.1 Inspections and Maintenance. Inspections and maintenance of BMPs associated with clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area.

G.5.4.2 Final Stabilization. Stabilization measures must be initiated immediately in portions of the site where development activities have permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has permanently ceased. Until final stabilization is achieved temporary stabilization measures, such as blankets and tackifiers, must be used.

## **G.6 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

The SWPPP requirements in Part G.6 are applicable for active metal mining facilities, inactive mining facilities, temporarily inactive metal mining facilities, temporarily inactive metal mining facilities, and sites undergoing reclamation. In addition to the following requirements, you must also comply with the requirements listed in Part 2 in the permit.

- G.6.1 Nature of Industrial Activities. (See also Part 2.1.2.) Briefly describe the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities.
- G.6.2 Site Map. (See also Part 2.1.2) Also identify the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage (where water leaves mine) or other process water; tailings piles and ponds (including proposed ones); heap leach pads; off-site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.
- G.6.3 Potential Pollutant Sources. (See also Part 2.1.4) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. Consider these factors: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in ore type being mined, update your SWPPP with this information.
- G.6.4 Site Inspections. (See also Part 2.1.5.6 and G.5.2) Inspect sites at least monthly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters which are designated as outstanding waters or waters which are impaired for parameters listed in Table G-2 must be inspected monthly.
- G.6.5 Employee Training. (See also Part 2.1.5.7) Conduct employee training at least annually at active and temporarily inactive sites. All employee training(s) must be documented in the SWPPP.

G.6.6 Stormwater Controls. (See also Part 2.1.5) Consider each of the following BMPs. The potential pollutants identified in Part G.6.3 shall determine the priority and appropriateness of the BMPs selected. If BMPs are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP.

G.6.6.1 Stormwater Diversions: Consider diverting stormwater away from potential pollutant sources. Following are some BMP options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

G.6.6.2 Sediment and Erosion Control: (See also Part 2.1.5.8) Consider a range of erosion controls within the broad categories of: flow diversion (e.g., swales); stabilization (e.g., temporary or permanent seeding); and structural controls (e.g., sediment traps, dikes, silt fences).

G.6.6.3 Management of Runoff: (See also Part 2.1.5.9) Consider the potential pollutant sources given in Part G.6.3 when determining reasonable and appropriate measures for managing runoff.

G.6.6.4 Capping: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

G.6.6.5 Treatment: If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged. Treated runoff may be discharged as a stormwater source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

G.6.6.6 Certification of Discharge Testing: (See also Part 2.1.4.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-stormwater discharges such as seeps or adit discharges, or discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 440), such as mine drainage or process water. Alternatively (if applicable), you may certify in your SWPPP that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling. This certification must identify the non-stormwater discharges,

the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

**G.7 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

G.7.1 *Analytic Monitoring for Copper Ore Mining and Dressing Facilities.* Active copper ore mining and dressing facilities must sample and analyze stormwater discharges for the pollutants listed in Table G-1.

<b>Table G-1 Sector-specific Numeric Effluent Limitations and Benchmark Monitoring for Copper Ore Mining and Dressing Facilities</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Copper Ore Mining and Dressing Facilities (SIC 1021)	Total Suspended Solids (TSS)	100 mg/L	--
	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
	Chemical Oxygen Demand (COD)	120 mg/L	--

<sup>1</sup> You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

G.7.2 *Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Sites, Inactive Sites, and Sites Undergoing Reclamation.* For discharges from waste rock and overburden piles, perform analytic monitoring quarterly in the first year of your coverage for the parameters listed in Table G-2 (see Part 3.2.2.1). Permittees must also conduct analytic monitoring quarterly in the first year of your coverage for the parameters listed in Table G-3 (see Part 3.2.2.1). The monitoring schedule is specified in Part 3.2.2.1. The Secretary may also notify you that you must perform additional monitoring to accurately characterize the quality and quantity of pollutants discharged from your waste rock and overburden piles.

**Table G-2. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring for Discharges from Waste Rock and Overburden Piles from Active Ore Mining or Dressing Facilities, and Sites Undergoing Reclamation**

<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Cutoff Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099)	Total Suspended Solids (TSS)	100 mg/L	--
	Turbidity	50 NTU	--
	pH	6.0-9.0 s.u.	--
	Hardness (as CaCO <sub>3</sub> ; calc. From Ca, Mg) <sup>2</sup>	no benchmark value	--
See above, as applicable (when analyzing hardness for a suite of metals, it is more cost effective to add analysis of calcium and magnesium, and have hardness calculated than to require hardness analysis separately)	Total Recoverable Antimony	0.64 mg/L	--
	Total Recoverable Arsenic	0.15 mg/L	--
	Total Recoverable Beryllium	0.13 mg/L	--
	Total Recoverable Cadmium <sup>3</sup>	0.0021 mg/L	--
	Total Recoverable Copper <sup>4</sup>	0.014 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Lead <sup>5</sup>	0.082 mg/L	--
	Total Recoverable Mercury	0.0014 mg/L	--
	Total Recoverable Nickel <sup>6</sup>	0.47 mg/L	--
	Total Recoverable Selenium	0.005 mg/L	--
	Total Recoverable Silver <sup>7</sup>	0.0038 mg/L	--
	Total Recoverable Zinc <sup>8</sup>	0.12 mg/L	--

<sup>1</sup> You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the

average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Benchmark monitoring cutoff concentrations for hardness dependent elements are based on a nominal hardness of 100 mg/L CaCO<sub>3</sub>.

<sup>3</sup> The benchmark value of cadmium is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table G-2 (i.e. 0.0021 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for cadmium:

$$\text{Benchmark} = (e^{[(1.0166)(\ln \text{hardness}) - 3.924]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.0166)(\ln 175) - 3.924]})/1000 \\ &= (e^{1.327})/1000 \\ &= 3.76/1000 \\ &= 0.0038 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for cadmium:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.0021
125	0.0027
150	0.0032
175	0.0038
200	0.0043
225	0.0049
250	0.0054

<sup>4</sup> The benchmark value of copper is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table G-2 (i.e. 0.014 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for copper:

$$\text{Benchmark} = (e^{[(0.9422)(\ln \text{hardness}) - 1.700]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.9422)(\ln 175) - 1.700]})/1000 \\ &= (e^{3.166})/1000 \\ &= 23.72/1000 \\ &= 0.024 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for copper:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.014
125	0.017
150	0.021
175	0.024
200	0.027
225	0.030
250	0.033

<sup>5</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table G-2 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23
250	0.26

<sup>6</sup> The benchmark value of nickel is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table G-2 (i.e. 0.47 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for nickel:

$$\text{Benchmark} = (e^{[(0.8460)(\ln \text{hardness}) + 2.255]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\text{Benchmark} = (e^{[(0.8460)(\ln 175) + 2.255]})/1000$$

$$\begin{aligned}
&= (e^{6.624})/1000 \\
&= 753.26/1000 \\
&= 0.75 \text{ mg/L}
\end{aligned}$$

The following are example benchmark values for nickel:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.47
125	0.57
150	0.66
175	0.75
200	0.84
225	0.93
250	1.02

<sup>7</sup> The benchmark limitation value of silver is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table G-2 (i.e. 0.0038 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for silver:

$$\text{Benchmark} = (e^{[(1.72)(\ln \text{hardness}) - 6.59]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned}
\text{Benchmark} &= (e^{[(1.72)(\ln 175) - 6.59]})/1000 \\
&= (e^{2.293})/1000 \\
&= 9.909/1000 \\
&= 0.0099 \text{ mg/L}
\end{aligned}$$

The following are example benchmark values for silver:

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.0038
125	0.0056
150	0.0076
175	0.0099
200	0.013
225	0.015
250	0.018

<sup>8</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table G-2 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

G.7.3 Additional Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles. Table G-3 contains additional monitoring requirements for specific ore mine categories. Perform the monitoring quarterly in the first year of coverage (see Part 3.2.2.1). The monitoring schedule is specified in Part 3.2.2.1. The initial sampling event for a pollutant parameter required in Table G-2 satisfies the requirement for the first sample of any pollutant measurement in Table G-3.

<b>Table G-3. Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles from Active Ore Mining or Dressing Facilities, Inactive Sites, and Sites Undergoing Reclamation</b>			
<b>Supplemental Requirements</b>			
<b>Type of Ore Mined</b>	<b>Pollutants of Concern</b>		
	<b>Total Suspended Solids (TSS)</b>	<b>pH</b>	<b>Metals, Total Recoverable</b>
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)

<b>Table G-3. Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles from Active Ore Mining or Dressing Facilities, Inactive Sites, and Sites Undergoing Reclamation</b>			
<b>Supplemental Requirements</b>			
<b>Type of Ore Mined</b>	<b>Pollutants of Concern</b>		
	<b>Total Suspended Solids (TSS)</b>	<b>pH</b>	<b>Metals, Total Recoverable</b>
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead, Zinc (H)
Copper, Lead, Zinc, Gold, Silver, and Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead, Mercury, Zinc (H)
Uranium, Radium, and Vanadium	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

Note: (H) indicates that hardness must also be measured when this pollutant is measured.

G.7.4 Reporting Requirements for Stormwater Discharges from Waste Rock and Overburden Piles. Submit monitoring results for each outfall discharging stormwater from waste rock and overburden piles, or certifications in accordance with Part 3.6.

<b>Table G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation</b>	
<b>Discharge/Source of Discharge</b>	<b>Note/Comment</b>
<b>Piles</b>	
Waste rock/overburden	If composed entirely of stormwater and not combining with mine drainage. See note below.
Topsoil	
<b>Roads constructed of waste rock or spent ore</b>	
Onsite haul roads	If composed entirely of stormwater and not combining with mine drainage. See note below.
Offsite haul and access roads	
<b>Roads not constructed of waste rock or spent ore</b>	
Onsite haul roads	Except if mine drainage is used for dust control
Offsite haul and access roads	
<b>Milling/concentrating</b>	
Runoff from tailings dams and dikes when constructed of waste rock/tailings	Except if process fluids are present and only if composed entirely of stormwater and not combining with mine drainage. See Note below.
Runoff from tailings dams/dikes when not constructed of waste rock and tailings	Except if process fluids are present
Concentration building	If stormwater only and no contact with piles
Mill site	If stormwater only and no contact with piles
<b>Ancillary areas</b>	
Office and administrative building and housing	If mixed with stormwater from the industrial area
Chemical storage area	
Docking facility	Except if excessive contact with waste product that would otherwise constitute mine drainage
Explosive storage	
Fuel storage (oil tanks/coal piles)	
Vehicle and equipment maintenance area/building	
Parking areas	But coverage unnecessary if only employee and visitor-type parking

<b>Table G-4. Applicability of the Multi-Sector General Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation</b>	
<b>Power plant</b>	
Truck wash area	Except when excessive contact with waste product that would otherwise constitute mine drainage
<b>Reclamation-related areas</b>	
Any disturbed area (unreclaimed)	Only if not in active mining area
Reclaimed areas released from reclamation bonds prior to Dec. 17, 1990	
Partially/inadequately reclaimed areas or areas not released from reclamation bond	

Note: Stormwater runoff from these sources are subject to the NPDES program for stormwater unless mixed with discharges subject to the 40 CFR Part 440 that are not regulated by another permit prior to mixing. Non-stormwater discharges from these sources are subject to NPDES permitting and may be subject to the effluent limitation guidelines under 40 CFR Part 440. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless: (1) it drains naturally (or is intentionally diverted) to a point source; and (2) combines with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, as well as meeting other eligibility criteria contained in Part I.B. of the permit. Permit applicants bear the initial responsibility for determining the applicable technology-based standard for such discharges. Contact the Agency for assistance determining the nature and scope of the "active mining area" on a mine-by-mine basis, as well as to determine the appropriate permitting mechanism for authorizing such discharges.

## **G.8. Termination of Permit Coverage**

- G.8.1 Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit, provided that the covered stormwater discharges do not have the potential to cause or contribute to violations of state water quality standards. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part G.8.2.
- G.8.2 Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if stormwater runoff that comes into contact with 1) raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been

completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

## **Subsection H - Sector H - Coal Mines and Coal Mining-Related Facilities.**

### **H.1 Covered Stormwater Discharges.**

The requirements in Subsection H apply to stormwater discharges associated with industrial activity from coal mines and coal mining-related facilities as identified by the SIC Codes specified under Sector H in Table D-1 of Appendix D.

### **H.2 Industrial Activities Covered by Sector H.**

Stormwater discharges from the following areas of coal mines may be eligible for this permit.

- H.2.1 haul roads (nonpublic roads on which coal or coal refuse is conveyed);
- H.2.2 access roads (nonpublic roads providing light vehicular traffic within the facility property and to public roadways);
- H.2.3 railroad spurs, siding, and internal haulage lines (rail lines used for hauling coal within the facility property and to offsite commercial railroad lines or loading areas);
- H.2.4 conveyor belts, chutes, and aerial tramway haulage areas (areas under and around coal or refuse conveyer areas, including transfer stations); and
- H.2.5 equipment storage and maintenance yards, coal handling buildings and structures, and inactive coal mines and related areas (abandoned and other inactive mines, refuse disposal sites, and other mining-related areas).

### **H.3 Limitations on Coverage.**

- H.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) Not covered by this permit: discharges from pollutant seeps or underground drainage from inactive coal mines and refuse disposal areas that do not result from precipitation events, and discharges from floor drains in maintenance buildings and other similar drains in mining and preparation plant areas.
- H.3.2 Discharges Subject to Stormwater Effluent Guidelines. (See also Part 1.3.4.5) Not authorized by this permit: stormwater discharges subject to an existing effluent limitation

guideline at 40 CFR Part 434.

#### **H.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- H.4.1 Other Applicable Regulations. Most active coal mining-related areas (SIC Codes 1221-1241) are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). All SMCRA requirements regarding control of stormwater-related pollutant discharges must be addressed in the SWPPP (directly or by reference).
- H.4.2 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: all applicable mining-related areas described in Part H.2; acidic spoil, refuse, or unreclaimed disturbed areas; and liquid storage tanks containing pollutants such as caustics, hydraulic fluids, and lubricants.
- H.4.3 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following sources and activities that have potential pollutants associated with them: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid, or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil.
- H.4.4 Good Housekeeping Measures. (See also Part 2.1.5.1) As part of your good housekeeping program, consider using sweepers and covered storage, watering haul roads to minimize dust generation, and conserving vegetation (where possible) to minimize erosion.
- H.4.5 Preventive Maintenance. (See also Part 2.1.5.3) Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.
- H.4.6 Inspections of Active Mining-Related Areas and Inactive Areas Under SMCRA Bond Authority. (See also Part 2.1.5.6) Perform quarterly inspections of areas covered by this permit, corresponding with the inspections as performed by SMCRA inspectors, of all mining-related areas required by SMCRA. Also maintain the records of the SMCRA authority representative.
- H.4.7 Sediment and Erosion Control. (See also Part 2.1.5.8) As indicated in Part H.4.1, SMCRA requirements regarding sediment and erosion control measures are primary requirements of the SWPPP for mining-related areas subject to SMCRA authority.
- H.4.8 Comprehensive Site Compliance Evaluation. (See also Part 3.1) Your evaluation program must include inspections for pollutants entering the drainage system from activities

located on or near coal mining-related areas. Among the areas to be inspected are haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas.

**H.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table H-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Coal Mines and Related Areas (SIC 1221-1241)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection I - Sector I-Oil and Gas Extraction and Refining.**

**I.1 Covered Stormwater Discharges.**

The requirements in Subsection I apply to stormwater discharges associated with industrial activity from Oil and Gas Extraction and Refining facilities as identified by the SIC Codes specified under Sector I in Table D-1 of Appendix D of the permit.

**I.2 Industrial Activities Covered By Sector I.**

Permittees under Sector I are primarily engaged in the following types of activities:

- I.2.1 oil and gas exploration, production, processing or treatment operations, or transmission facilities; and
- I.2.2 extraction and production of crude oil, natural gas, oil sands, and shale; the production of hydrocarbon liquids and natural gas from coal; and associated oil field service, supply, and repair industries.

**I.3 Limitations on Coverage.**

- I.3.1 Stormwater Discharges Subject to Effluent Limitation Guidelines. This permit does not authorize stormwater discharges from petroleum refining or drilling operations that are subject to nationally established effluent limitation guidelines found at 40 CFR Parts 419 and 435, respectively.

NOTE: Most contaminated discharges at petroleum refining and drilling facilities are subject to these effluent guidelines and are not eligible for coverage by this permit. (e.g., stormwater runoff which comes into contact with any raw material, intermediate produce, finished product, by-product or waste product located on petroleum refinery property, deck drainage (which includes stormwater) from oil and gas extraction facilities in the Offshore and Coastal Subcategories, etc.).

- I.3.2 Non-Stormwater Discharges. Discharges of vehicle and equipment washwater, including tank cleaning operations, are not authorized by this permit. Alternatively, washwater discharges must be authorized under a separate NPDES permit, or be discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements.

#### **I.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- I.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: Reportable Quantity (RQ) releases; locations used for the treatment, storage, or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirements for “No Discharge” in accordance with 40 CFR 435.32; and the structural controls to achieve compliance with the “No Discharge” requirements.
- I.4.2 Potential Pollutant Sources. (See also Part 2.1.4) Also describe the following sources and activities that have potential pollutants associated with them: chemical, cement, mud, or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities. In addition, include information about the RQ release that triggered the permit application requirements: the nature of the release (e.g., spill of oil from a drum storage area), amount of oil or hazardous substance released, amount of substance recovered, date of the release, cause of the release (e.g., poor handling techniques and lack of containment in the area), areas affected by the release (i.e., land and water), procedure to clean up release, actions or procedures implemented to prevent or improve response to a release, and remaining potential contamination of stormwater from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).
- I.4.3 Inspections. (See also Part 2.1.5.6)

- I.4.3.1 Inspection Frequency. Inspect all equipment and areas addressed in the SWPPP at least monthly. Also inspect equipment and vehicles that store, mix (including all on- and offsite mixing tanks), or transport chemicals or hazardous materials (including those transporting supplies to oil field activities) on a monthly basis.
- I.4.3.2 Temporarily or Permanently Inactive Oil and Gas Extraction Facilities. For facilities that are remotely located and unstaffed, perform the inspections at least annually.
- I.4.4 Erosion and Sedimentation Control. (See also Part 2.1.5.8.) Unless covered by the current Construction General Permit (CGP), the additional sediment and erosion control requirements for well drillings and sand/shale mining areas include the following:
  - I.4.4.1 Site Description. Also include a description of the nature of the exploration activity, estimates of the total area of site and area disturbed due to exploration activity, an estimate of runoff coefficient of the site, a site drainage map, including approximate slopes, and the names of all receiving waters. All erosion and sedimentation control measures must be inspected every 7 days.
  - I.4.4.2 Vegetative Controls. Describe and implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Consider the following (or equivalent measures): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.
- I.4.5 Contact with Waste Water Pollutants at Exploration and Production Facilities. Take measures necessary to prevent discharge of stormwater coming into contact with waste water pollutants from any sources associated with production, field exploration, drilling, well completion, or well treatment (i.e., produced water, drilling muds, drill cuttings, and produced sand).
  - I.4.5.1 Vehicle and Equipment Storage Areas. Confine vehicles and equipment awaiting or having undergone maintenance to designated areas (as marked on the site map). Describe and implement measures to minimize contaminants from these areas (e.g., drip pans under equipment, indoor storage, use of berms or dikes, or other equivalent measures).
  - I.4.5.2 Material and Chemical Storage Areas. Maintain these areas in good condition to prevent contamination of stormwater. Plainly label all hazardous materials.
  - I.4.5.3 Chemical Mixing Areas. (See also Part 2.1.4.) Describe and implement measures that prevent or minimize contamination of stormwater runoff from

chemical mixing areas.

**I.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table I-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Oil and Gas Extraction and Refining (SIC 1311, 1321, 1381-1389, 2911)	Total Suspended Solids (TSS)	100 mg/L	--
Oil Refining (SIC 2911)	Total Recoverable Lead <sup>2</sup>	0.082 mg/L	--
	Total Recoverable Nickel <sup>3</sup>	0.47 mg/L	--
	Total Recoverable Zinc <sup>4</sup>	0.12 mg/L	--
	Ammonia Nitrogen	19 mg/L	--
	Nitrate+Nitrite Nitrogen	0.68 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table I-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23

<sup>3</sup> The benchmark value of nickel is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table I-1 (i.e. 0.47 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for nickel:

$$\text{Benchmark} = (e^{[(0.8460)(\ln \text{hardness}) + 2.255]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8460)(\ln 175) + 2.255]})/1000 \\ &= (e^{6.624})/1000 \\ &= 753.26/1000 \\ &= 0.75 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for nickel:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.47
125	0.57
150	0.66
175	0.75
200	0.84
225	0.93
250	1.02

<sup>4</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table I-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12

125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

## **Subsection J - Sector J-Mineral Mining and Dressing**

### **J.1 Covered Stormwater Discharges.**

The requirements in Subsection J apply to stormwater discharges associated with industrial activity from active and inactive mineral mining and dressing facilities as identified by the SIC Codes specified under Sector J in Table D-1 of Appendix D of the permit.

J.1.1 Covered Discharges from Inactive Facilities. All stormwater discharges.

J.1.2 Covered Discharges from Active and Temporarily Inactive Facilities. Only the stormwater discharges from the following areas are covered: waste rock and overburden piles if composed entirely of stormwater and not combining with mine drainage; topsoil piles; offsite haul and access roads; onsite haul and access roads constructed of waste rock or overburden if composed entirely of stormwater and not combining with mine drainage; onsite haul and access roads not constructed of waste rock or overburden, except if mine drainage is used for dust control; runoff from dams or dikes when not constructed of waste rock and no process fluids are present; runoff from dams or dikes when constructed of waste rock and no process fluids are present, if composed entirely of stormwater and not combining with mine drainage; concentration building if no contact with material piles; mill site if no contact with material piles; office or administrative building and housing if mixed with stormwater from industrial area; chemical storage area; docking facility if no excessive contact with waste product that would otherwise constitute mine drainage; explosive storage; fuel storage; vehicle and equipment maintenance area and building; parking areas (if necessary); power plant; truck wash areas if no excessive contact with waste product that would otherwise constitute mine drainage; unreclaimed, disturbed areas outside of active mining area; reclaimed areas released from reclamation bonds prior to December 17, 1990; and partially or inadequately reclaimed areas or areas not released from reclamation bonds.

J.1.3 Covered Discharges from Exploration and Development of Mineral Mining Facilities. All stormwater discharges.

J.1.4 Covered Discharges from Facilities at Mining Sites and Undergoing Reclamation. All stormwater discharges.

## **J.2 Industrial Activities Covered by Sector J.**

Permittees under Sector J are primarily engaged in the following types of activities:

- J.2.1 exploring for minerals (e.g., stone, sand, clay, chemical and fertilizer minerals, non-metallic minerals), developing mines, and the mining of minerals; and
- J.2.2 mineral dressing and non-metallic mineral services, and
- J.2.3 reclamation of mining sites.

## **J.3 Limitations on Coverage.**

Most stormwater discharges subject to an existing effluent limitation guideline at 40 CFR Part 436 are not authorized by this permit. The exceptions to this limitation, which are covered by this permit, are mine dewatering discharges composed entirely of stormwater or ground water seepage from construction sand and gravel, industrial sand, and crushed stone mining facilities.

- J.3.1 **Prohibition of Stormwater Discharges.** Stormwater discharges not authorized by this permit: discharges from active mineral mining facilities that are subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).

NOTE: Discharges that come in contact with overburden or waste rock are subject to 40 CFR Part 436, providing that the discharges drain to a point source (either naturally or as a result of intentional diversion) and they combine with “mine drainage” that is otherwise regulated under the Part 440 regulations. Discharges from overburden or waste rock can be covered under this permit if they are composed entirely of stormwater, do not combine with sources of mine drainage that are subject to 40 CFR Part 440, and meet other eligibility criteria contained in Part 1.2.2.1.

- J.3.2 **Prohibition of Non-Stormwater Discharges.** Not authorized by this permit: adit drainage and contaminated springs or seeps. Contaminated seeps and springs discharging from waste rock dumps that do not directly result from precipitation events are not authorized by this permit (see also the standard Limitations on Coverage in Part 1.3.3).

## **J.4 Definitions.**

- J.4.1 **Mining operation** - typically consists of three phases, any one of which individually qualifies as a “mining activity.” The phases are the exploration and construction phase, the active phase, and the reclamation phase.
- J.4.2 **Exploration and construction phase** - entails exploration and land disturbance activities to determine the financial viability of a site. Construction includes the building of site

access roads and removal of overburden and waste rock to expose mineable minerals.

J.4.3 Active phase - activities including each step from extraction through production of a salable product.

J.4.4 Reclamation phase - activities intended to return the land to its pre-mining state.

NOTE: The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

J.4.5 Active Mineral Mining Facility - a place where work or other activity related to the extraction, removal, or recovery of minerals is being conducted. This definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun.

J.4.6 Inactive Mineral Mining Facility - a site or portion of a site where mineral mining and/or dressing occurred in the past but that is not an active facility as defined above, and where the inactive portion is not covered by an active permit issued by the applicable State or Federal government agency.

J.4.7 Temporarily Inactive Mineral Mining Facility - a site or portion of a site where mineral mining and/or dressing occurred in the past but that is not currently being actively undertaken, and where the facility is covered by an active mining permit issued by the applicable State or Federal government agency.

J.4.8 Final Stabilization - a site or portion of a site is “finally stabilized” when:

- a. All soil disturbing activities at the site have been completed and either of the two following criteria are met:
  - i. A uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
  - ii. Equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
- b. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ( $0.70 \times 0.50 = 0.35$ ) would require 35 percent total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.

## **J.5 Clearing, Grading, and Excavation Activities.**

Clearing, grading, and excavation activities being conducted as part of the exploration and development phase of a mining operation may be covered under this permit if the clearing,

grading, and excavation activities meet the terms and conditions and applicable technical standards of the Construction General Permit 3-9001 or its replacement.

#### J.5.1 Management Practices for Clearing, Grading, and Excavation Activities.

- J.5.1.1 Selecting and installing control measures. A combination of sediment and erosion control measures are required to achieve maximum pollutant removal. All control measures must be properly selected, installed, and maintained in accordance with any relevant manufacturer specifications and good engineering practices.
- J.5.1.2 Removal of Sediment. If sediment escapes the site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.
- J.5.1.3 Good Housekeeping. Litter, debris, and chemicals that could be exposed to stormwater must be prevented from becoming a pollutant source in stormwater discharges.
- J.5.1.4 Velocity Dissipation. Velocity dissipation devices must be placed at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from disturbed areas and from any stormwater retention or detention facilities to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).
- J.5.1.5 Retention and Detention of Stormwater Runoff. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.
- J.5.1.6 Temporary Stabilization of Disturbed Areas. Stabilization measures must be initiated as soon as practicable in portions of the site where development activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.

#### J.5.2 Requirements for Inspection of Clearing, Grading, and Excavation Activities.

- J.5.2.1 Inspection Frequency. Inspections must be conducted at least once every 7 calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen).
- J.5.2.2 Qualified Personnel for Inspections. Inspections must be conducted by qualified personnel. "Qualified personnel" means a person knowledgeable in the principles and practice of erosion and sediment control who possesses the skills to assess conditions at the construction site that could impact stormwater quality and the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the clearing, grading, and excavation activities.
- J.5.2.3 Location of Inspections. Inspections must include all areas of the site disturbed by clearing, grading, and excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures identified in the SWPPP must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.
- J.5.2.4 Inspection Reports. For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include:
- a. The inspection date;
  - b. Names, titles, and qualifications of personnel making the inspection;
  - c. Weather information for the period since the last inspection (or note if it is the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
  - d. Weather information and a description of any discharges occurring at the time of the inspection;
  - e. Location(s) of discharges of sediment or other pollutants from the site;
  - f. Location(s) of BMPs that need to be maintained;
  - g. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
  - h. Location(s) where additional BMPs are needed that did not exist at the time of inspection; and
  - i. Corrective action(s) required, including any changes to the SWPPP necessary and implementation dates.

A record of each inspection and of any actions taken in accordance with this Part must be retained as part of the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports must identify any incidents of non-compliance with the permit conditions. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the clearing, grading, and excavation activities are in compliance with the SWPPP and this permit. The report must be signed in accordance with Subpart 11 of Appendix B.

### J.5.3 Maintenance of Controls for Clearing, Grading, and Excavation Activities

J.5.3.1 Maintenance of BMPs. All erosion and sediment control measures and other protective measures identified in the SWPPP must be maintained in effective operating condition. If site inspections required by Section J.5.2 identify BMPs that are not operating effectively, maintenance must be performed as soon as possible and before the next storm event whenever practicable to maintain the continued effectiveness of stormwater controls.

J.5.3.2 Modification of BMPs. Existing BMPs need to be modified or, if additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as possible.

J.5.3.3 Maintenance of sediment traps and ponds. Sediment from sediment traps or sedimentation ponds must be removed when design capacity has been reduced by 50 percent.

J.5.4 Requirements for Cessation of Clearing, Grading, and Excavation Activities. Inspections and maintenance of BMPs associated with clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area.

## **J.6 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

The SWPPP requirements in Part J.6 are applicable for active mineral mining facilities, inactive mining facilities, temporarily inactive mineral mining facilities, and sites undergoing reclamation. In addition to the following requirements, you must also comply with the requirements listed in Part 2 in the permit.

J.6.1 Nature of Industrial Activities. (See also Part 2.1.2) Briefly describe the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major

transportation routes and communities.

- J.6.2 Site Map. (See also Part 2.1.2.) Also identify the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage (where water leaves mine) or other process water; heap leach pads; off-site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.
- J.6.3 Potential Pollutant Sources. (See also Part 2.1.4) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. Consider these factors: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock.
- J.6.4 Site Inspections. (See also Part 2.1.5.6 and J.5.2.) Inspect sites at least monthly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters which are designated as outstanding waters or waters which are impaired for sediment or nitrogen must be inspected monthly.
- J.6.5 Employee Training. (See also Part 2.1.5.7) Conduct employee training at least annually at active and temporarily inactive sites. All employee training(s) must be documented in the SWPPP.
- J.6.6 Stormwater Controls. (See also Part 2.1.5) Consider each of the following BMPs. The potential pollutants identified in Part J.6.3 shall determine the priority and appropriateness of the BMPs selected. If BMPs are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP.
- J.6.6.1 Stormwater Diversions: Consider diverting stormwater away from potential pollutant sources. Following are some BMP options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

- J.6.6.2 Erosion and Sedimentation Control: (See also Part 2.1.5.8) Consider a range of erosion controls within the broad categories of: flow diversion (e.g., swales); stabilization (e.g., temporary or permanent seeding); and structural controls (e.g., sediment traps, dikes, silt fences).
- J.6.6.3 Management of Runoff: (See also Part 2.1.5.9) Consider the potential pollutant sources given in Part J.6.3 when determining reasonable and appropriate measures for managing runoff.
- J.6.6.4 Capping: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.
- J.6.6.5 Treatment: If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged. Treated runoff may be discharged as a stormwater source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).
- J.6.6.6 Certification of Discharge Testing: (See also Part 2.1.4.4) Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-stormwater discharges such as seeps or adit discharges, or discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 436), such as mine drainage or process water. Alternatively (if applicable), you may certify in your SWPPP that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

**J.7 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table J-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
Mine Dewatering Activities at Construction Sand and Gravel; Industrial Sand; and Crushed Stone	Total Suspended Solids (TSS)	100 mg/L	25 mg/L, monthly avg.

<b>Table J-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
			45 mg/L, daily maximum
	pH	--	6.0 - 9.0
Sand and Gravel Mining (SIC 1442, 1446)	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Dimension and Crushed Stone and Nonmetallic Minerals (except fuels) (SIC 1411, 1422-1429, 1481, 1499)	Total Suspended Solids (TSS)	100 mg/L	--
Clay, Ceramic, and Refractory Materials; Chemical and Fertilizer Mineral Mining (SIC 1455, 1459, 1474-1479)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Monitor once per year for each monitoring year.

J.7.2 Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Sites, Inactive Sites, and Sites Undergoing Reclamation. For discharges from waste rock and overburden piles, perform analytic monitoring quarterly as explained in Part 3.2.2.1 of the 2006 MSGP for the parameters listed in Table J-1. The Secretary may also notify you that you must perform additional monitoring to accurately characterize the quality and quantity of pollutants discharged from your waste rock and overburden piles.

J.7.3 Reporting Requirements for Storm Water Discharges from Waste Rock and Overburden Piles. Submit monitoring results for each outfall discharging storm water from waste rock and overburden piles, or certifications in accordance with Part 3.2.5. Submit monitoring reports on DMR forms postmarked no later than 60 days after collection for each sampling event.

## **J.8. Termination of Permit Coverage**

J.8.1 Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation

requirements after December 17, 1990, is no longer required to maintain coverage under this permit, provided that the covered storm water discharges do not have the potential to cause or contribute to violations of state water quality standards. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part J.8.2.

- J.8.2 Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if storm water runoff that comes into contact with 1) raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to storm water discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

## **Subsection K - Sector K-Hazardous Waste Treatment, Storage, or Disposal Facilities**

### **K.1 Covered Stormwater Discharges.**

The requirements in Subsection K apply to stormwater discharges associated with industrial activity from hazardous waste treatment, storage, or disposal facilities (TSDFs) as identified by the Activity Code HZ specified under Sector K in Table D-1 of Appendix D of the permit.

### **K.2 Industrial Activities Covered by Sector K.**

This permit authorizes stormwater discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes, including those that are operating under interim status or a permit under subtitle C of RCRA.

### **K.3 Limitations on Coverage.**

- K.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory-derived wastewater, and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

K.3.2 Limitations on Coverage for Facilities Providing Commercial TSDF Services. For facilities located in Region 6 (see Appendix C) coverage is limited to hazardous waste TSDFs that are self-generating (including occasionally accepting wastes from community household hazardous waste collection events as public service), handle only residential wastes, and/or only store hazardous wastes and do not treat or dispose of them. Coverage under this permit is not available to commercial waste disposal and treatment facilities located in Region 6 that dispose and treat on a commercial basis any produced hazardous wastes (i.e., not their own) as a service to commercial or industrial generators.

#### **K.4 Definitions.**

K.4.1 Contaminated stormwater - stormwater that comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part K.4.5. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

K.4.2 Drained free liquids - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

K.4.3 Land treatment facility - a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are considered disposal facilities if the waste will remain after closure.

K.4.4 Landfill - an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

K.4.5 Landfill wastewater - as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, noncontaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

K.4.6 Leachate - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

- K.4.7 Noncontaminated stormwater - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in Part K.4.5. Noncontaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.
- K.4.8 Pile - any noncontainerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.
- K.4.9 Surface impoundment - a facility or part of a facility that is a natural topographic depression, human-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

**K.5 Numeric Limitations, Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table K-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
ALL - Industrial Activity Code "HZ" (Note: permit coverage limited in some States)	Ammonia	19 mg/L	--
	Total Recoverable Magnesium	0.064 mg/L	--
	Chemical Oxygen Demand (COD)	120 mg/L	--
	Total Recoverable Arsenic	0.15 mg/L	--
	Total Recoverable Cadmium <sup>3</sup>	0.0021 mg/L	--
	Total Cyanide	0.022 mg/ L	--
	Total Recoverable Lead <sup>4</sup>	0.082 mg/ L	--
	Total Recoverable Mercury	0.0014 mg/ L	--
	Total Recoverable Selenium	0.005 mg/L	--
	Total Recoverable Silver <sup>5</sup>	0.0038 mg/ L	--
	Total Suspended Solids (TSS)	100 mg/L	--
ALL - Industrial Activity Code "HZ" Subject to the Provisions of 40 CFR Part 445, Subpart A	Biochemical Oxygen Demand (BOD <sub>5</sub> )	--	220 mg/L, daily maximum
		--	56 mg/L, monthly avg. maximum
	TSS	100 mg/L	88 mg/L, daily maximum
		--	27 mg/L, monthly avg. maximum
	Ammonia	--	10 mg/L, daily maximum
		--	4.9 mg/L, monthly avg. maximum
Alpha Terpineol	--	0.042 mg/L, daily maximum	

**Table K-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring**

Subsector (Discharges may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration <sup>1</sup>	Effluent Limit Guidelines <sup>2</sup>
		--	0.019 mg/L, monthly avg. maximum
	Aniline	--	0.024 mg/L, daily maximum
		--	0.015 mg/L, monthly avg. maximum
	Benzoic Acid	--	0.119 mg/L, daily maximum
		--	0.073 mg/L, monthly avg. maximum
	Naphthalene	--	0.059 mg/L, daily maximum
		--	0.022 mg/L, monthly avg. maximum
	p-Cresol	--	0.024 mg/L, daily maximum
		--	0.015 mg/L, monthly avg. maximum
	Phenol	--	0.048 mg/L, daily maximum
		--	0.029 mg/L, monthly avg. maximum
	Pyridine	--	0.072 mg/L, daily maximum
		--	0.025 mg/L, monthly avg. maximum
	Total Recoverable Arsenic	0.15 mg/L	1.1 mg/L, daily maximum
		--	0.54 mg/L, monthly avg. maximum

<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
	Total Recoverable Chromium	--	1.1 mg/L, daily maximum
		--	0.46 mg/L, monthly avg. maximum
	Total Recoverable Zinc	--	0.535 mg/L, daily maximum
		--	0.296 mg/L, monthly avg. maximum
	pH	--	Within the range of 6-9 pH units

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup>Monitor once per year for each monitoring year. As set forth at 40 CFR Part 445 Subpart A, these numeric limitations apply to contaminated stormwater discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the following facilities:

- (a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;
- (b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
- (c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or
- (d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

<sup>3</sup> The benchmark value of cadmium is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table K-1 (i.e. 0.0021 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the

following equation may be used to determine the benchmark value for cadmium:

$$\text{Benchmark} = (e^{[(1.0166)(\ln \text{hardness}) - 3.924]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.0166)(\ln 175) - 3.924]})/1000 \\ &= (e^{1.327})/1000 \\ &= 3.76/1000 \\ &= 0.0038 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for cadmium:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.0021
125	0.0027
150	0.0032
175	0.0038
200	0.0043
225	0.0049
250	0.0054

<sup>4</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table K-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23

<sup>5</sup> The benchmark limitation value of silver is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table K-1 (i.e. 0.0038 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for silver:

$$\text{Benchmark} = (e^{[(1.72)(\ln \text{hardness}) - 6.59]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.72)(\ln 175) - 6.59]})/1000 \\ &= (e^{2.293})/1000 \\ &= 9.909/1000 \\ &= 0.0099 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for silver:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.0038
125	0.0056
150	0.0076
175	0.0099
200	0.013
225	0.015
250	0.018

## **Subsection L - Sector L-Landfills, Land Application Sites, and Open Dumps.**

### **L.1 Covered Stormwater Discharges.**

The requirements in Subsection L apply to stormwater discharges associated with industrial activity from landfills and land application sites and open dumps as identified by the Activity Code specified under Sector L in Table D-1 of Appendix D of the permit.

### **L.2 Industrial Activities Covered by Sector L.**

This permit may authorize stormwater discharges for Sector L facilities associated with waste disposal at landfills, land application sites, and open dumps that receive or have received industrial waste, including sites subject to regulation under Subtitle D of RCRA.

### **L.3 Limitations on Coverage.**

L.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated ground water, laboratory wastewater, and contact washwater from washing truck and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

#### **L.4 Definitions.**

L.4.1 Contaminated stormwater - stormwater that comes in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

L.4.2 Drained free liquids - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

L.4.3 Landfill wastewater - as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

L.4.4 Leachate - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

L.4.5 Non-contaminated stormwater - stormwater that does not come in direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

#### **L.5 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

L.5.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled

leachate may commingle with runoff, and leachate collection and handling systems.

- L.5.2 Summary of Potential Pollutant Sources. (See also Part 2.1.4) Describe the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.
- L.5.3 Good Housekeeping Measures. (See also Part 2.1.5.1) As part of your good housekeeping program, consider providing protected storage areas for pesticides, herbicides, fertilizer, and other significant materials.
- L.5.4 Preventive Maintenance Program. (See also Part 2.1.5.3) As part of your preventive maintenance program, maintain the following: all containers used for outdoor chemical and significant materials storage, to prevent leaking; all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.
- L.5.5 Inspections. (See also Part 2.1.5.6)
  - L.5.5.1 Inspections of Active Sites. Inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is seasonally arid (annual rainfall averages from 0 to 10 inches) or semi-arid (annual rainfall averages from 10 to 20 inches), conduct inspections at least once every month.
  - L.5.5.2 Inspections of Inactive Sites. Inspect inactive landfills, open dumps, and land application sites at least monthly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.
- L.5.6 Recordkeeping and Internal Reporting. Implement a tracking system for the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

- L.5.7 Non-Stormwater Discharge Test Certification. (See also Part 2.1.4.4) The discharge test and certification must also be conducted for the presence of leachate and vehicle washwater.
- L.5.8 Erosion and Sedimentation Control. (See also Part 2.1.5.8) Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.
- L.5.9 Comprehensive Site Compliance Evaluation. (See also Part 3.1) Evaluate areas contributing to a stormwater discharge associated with industrial activities at landfills, open dumps, and land application sites for evidence of, or the potential for, pollutants entering the drainage system.

**L.6 Numeric Limitations, Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table L-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
All Landfill, Land Application Sites and Open Dumps (Industrial Activity Code “LF”)	Total Suspended Solids (TSS)	100 mg/L	--
All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60 (Industrial Activity Code “LF”)	Total Recoverable Iron	1.0 mg/L	--
All Landfills Subject to the Requirements of 40 CFR Part 445 Subpart B (Industrial Activity Code “LF”).	Biochemical Oxygen Demand (BOD <sub>5</sub> )	--	140 mg/L, daily maximum
			37 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	--	88 mg/L, daily maximum
			27 mg/L, monthly avg. maximum
	Ammonia	--	10 mg/L, daily maximum
			4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	--	0.033 mg/L, daily maximum
			0.016 mg/L monthly avg. maximum

<b>Table L-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines<sup>2</sup></b>
	Benzoic Acid	--	0.12 mg/L, daily maximum
			0.071 mg/L, monthly avg. maximum
	p-Cresol	--	0.025 mg/L, daily maximum
			0.014 mg/L, monthly avg. maximum
	Phenol	--	0.026 mg/L, daily maximum
			0.015 mg/L, monthly avg. maximum
	Total Recoverable Zinc	--	0.20 mg/L, daily maximum
			0.11 mg/L, monthly avg. maximum
	pH	--	Within the range of 6-9 pH units

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> Monitor once per year for each monitoring year. As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:

- (a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;
- (b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
- (c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or
- (d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

## **Subsection M - Sector M-Automobile Salvage Yards**

### **M.1 Covered Stormwater Discharges.**

The requirements in Subsection M apply to stormwater discharges associated with industrial activity from automobile salvage yards as identified by the Activity Code specified under Sector M in Table D-1 of Appendix D of this permit.

### **M.2 Industrial Activities Covered by Sector M.**

The types of activities that permittees under Sector M are primarily engaged in are dismantling or wrecking used motor vehicles for parts recycling or resale and for scrap.

### **M.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2.

M.3.1 Drainage Area Site Map. (See also Part 2.1.2) Indicate the location of each monitoring point and estimate the total acreage used for industrial activity including, but not limited to, dismantling, storage, and maintenance of used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.

M.3.2 Potential Pollutant Sources. (See also Part 2.1.4) Assess the potential for the following to

contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.

M.3.3 Spill and Leak Prevention Procedures. (See also Part 2.1.4.3) Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as feasible), or employ some other equivalent means to prevent spills and leaks.

M.3.4 Inspections. (See also Part 2.1.5.6) Immediately (or as soon thereafter as feasible) inspect vehicles arriving at the site for leaks. Inspect monthly, for signs of leakage, all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also inspect monthly, for signs of leakage, all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

M.3.5 Employee Training. (See also Part 2.1.5.7) If applicable to your facility, address the following area (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

M.3.6 Management of Runoff. (See also Part 2.1.5.9) Consider the following management practices: berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

**M.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Automobile Salvage Yards (SIC 5015)	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Lead <sup>2</sup>	0.082 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The

value given in Table M-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23
250	0.26

## **Subsection N - Sector N-Scrap Recycling and Waste Recycling Facilities.**

### **N.1 Covered Stormwater Discharges.**

The requirements in Subsection N apply to stormwater discharges associated with industrial activity from scrap recycling and waste recycling facilities as identified by the SIC Codes specified under Sector N in Table D-1 of Appendix D of the permit.

### **N.2 Industrial Activities Covered by Sector N.**

Permittees under Sector N are primarily engaged in the following types of activities:

- N.2.1 processing, reclaiming, and wholesale distribution of scrap and waste materials, such as ferrous and nonferrous metals, paper, plastic, cardboard, glass, and animal hides; and
- N.2.2 reclaiming and recycling of liquid wastes, such as used oil, antifreeze, mineral spirits, and industrial solvents.

### **N.3 Limitation on Coverage.**

Separate permit requirements have been established for recycling facilities that only receive source-separated recyclable materials primarily from non-industrial and residential sources (i.e., common consumer products including paper, newspaper, glass, cardboard, plastic containers, and aluminum and tin cans). This includes recycling facilities commonly referred to as material recovery facilities (MRF).

N.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) Non-stormwater discharges from turnings containment areas are not covered by this permit (see also Part N.4.2.3). Discharges from containment areas in the absence of a storm event are prohibited unless covered by a separate NPDES permit.

### **N.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the MSGP. Part N.4.1 contains a requirement that applies to all recycling facilities and is followed by Parts N.4.2 to N.4.4.4, which have requirements for specific types of recycling facilities. Implement and describe in your SWPPP a program to address those items that apply. Included are lists of BMP options that, along with any functional equivalents, should be considered for implementation. Selection or deselection of a particular BMP or approach is up to the best professional judgment (BPJ) of the operator, as long as the objective of the requirement is met.

N.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

N.4.2 Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials). Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily nonindustrial and residential sources.

N.4.2.1 Inbound Recyclable and Waste Material Control Program. Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some BMP options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches before delivery to your facility; (b) establish

procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in N.4.2.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with RCRA.

- N.4.2.2 Scrap and Waste Material Stockpiles and Storage (Outdoor). Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes. Following are some BMP options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; (d) silt fencing; and (e) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).
- N.4.2.3 Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage). Minimize contact of surface runoff with residual cutting fluids. Following are two BMP options that can be used singularly or in combination: (a) store all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover. Stormwater discharges from these areas are permitted, provided the runoff is first treated by an oil and water separator or its equivalent. Identify procedures to collect, handle, and dispose of or recycle residual fluids that may be present; (b) establish dedicated containment areas for all turnings that have been exposed to cutting fluids. Stormwater runoff from these areas can be discharged, provided that the containment areas are constructed of concrete, asphalt, or other equivalent types of impermeable material; there is a barrier around the perimeter of the containment areas (e.g., berms, curbing, elevated pads) to prevent contact with stormwater runoff; there is a drainage collection system for runoff generated from containment areas; you have a schedule to maintain the oil and water separator (or its equivalent); and you identify procedures for properly disposing of or recycling collected residual fluids.
- N.4.2.4 Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage). Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff. Following are some BMP options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other

processing areas to discharge to the storm sewer system; and (c) disconnecting or sealing off all floor drains connected to the storm sewer system.

- N.4.2.5 Scrap and Recyclable Waste Processing Areas. Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance, etc.). Following are some BMP options: (a) regularly inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) remove mercury switches from the hood and trunk lighting units, and remove anti-lock brake system units containing mercury switches (d) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; and (e) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (f) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (g) oil and water separators or sumps; (h) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (i) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); and (j) catch basin filters or sand filters.
- N.4.2.6 Scrap Lead-Acid Battery Program. Properly handle, store, and dispose of scrap lead-acid batteries. Following are some BMP options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and (e) provide employee training for the management of scrap batteries.
- N.4.2.7 Spill Prevention and Response Procedures. (See also Part 2.1.5.5) Minimize stormwater contamination at loading and unloading areas, and from equipment or container failures. Following are some BMP options (a) prevention and response measures for areas that are potential sources of fluid leaks or spills and (b) immediate containment and clean up of spills and leaks. If malfunctioning equipment is responsible for the spill or leak, repairs also should be conducted as soon as possible; (c) cleanup measures, including the use of dry absorbents. If this method is employed, an adequate supply of dry absorbent materials should be kept onsite, and used absorbent must be properly disposed of; (d) store drums containing liquids — especially oil and lubricants — indoors, in a bermed area,

in overpack containers or spill pallets, or in other containment devices; (e) install overfill prevention devices on fuel pumps or tanks; and (f) place drip pans or equivalent measures under leaking stationary equipment until the leak is repaired. The drip pans should be inspected for leaks and potential overflow, and all liquids must be properly disposed of (as per RCRA); and (g) install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

N.4.2.8 Inspections. (See also Part 2.1.5.6) Inspect all designated areas of the facility and equipment identified in the plan monthly.

N.4.2.9 Supplier Notification Program. As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

#### **N.4.3 Waste Recycling Facilities (Liquid Recyclable Materials).**

N.4.3.1 Waste Material Storage (Indoor). Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Containment, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some BMP options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system, or a mercury spill kit (never vacuum spilled or leaking mercury); (c) appropriate containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.

N.4.3.2 Waste Material Storage (Outdoor). Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some BMP options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures;

(c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.

N.4.3.3 Trucks and Rail Car Waste Transfer Areas. Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two BMP options (a) containment and diversionary structures to minimize contact with precipitation or runoff, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.

N.4.3.4 Inspections. (See also Part 2.1.5.6) The inspections must be performed monthly and include, at a minimum, all areas where waste is generated, received, stored, treated, or disposed of and that are exposed to either precipitation or stormwater runoff.

#### **N.4.4 Recycling Facilities (Source-Separated Materials).**

The following identifies considerations for facilities that receive only source-separated recyclables, primarily from nonindustrial and residential sources.

N.4.4.1 Inbound Recyclable Material Control. Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some BMP options (a) providing information and education measures to inform suppliers of recyclables which materials are acceptable and which are not, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.

N.4.4.2 Outdoor Storage. Minimize exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some BMP options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day's volume of recyclable material indoors.

N.4.4.3 Indoor Storage and Material Processing. Minimize the release of pollutants from indoor storage and processing areas. Following are some BMP options (a) schedule routine good housekeeping measures for all storage and processing

areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.

N.4.4.4 Vehicle and Equipment Maintenance. Following are some BMP options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

**N.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Scrap Recycling Facility (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Copper <sup>2</sup>	0.014 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Lead <sup>3</sup>	0.082 mg/L	--
	Total Recoverable Zinc <sup>4</sup>	0.12 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of copper is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table N-1 (i.e. 0.014 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for copper:

$$\text{Benchmark} = (e^{[(0.9422)(\ln \text{hardness}) - 1.700]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.9422)(\ln 175) - 1.700]})/1000 \\ &= (e^{3.166})/1000 \\ &= 23.72/1000 \\ &= 0.024 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for copper:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.014
125	0.017
150	0.021
175	0.024
200	0.027
225	0.030
250	0.033

<sup>3</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table N-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23
250	0.26

<sup>4</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The

value given in Table N-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

## **Subsection O - Sector O - Steam Electric Generating Facilities.**

### **O.1 Covered Stormwater Discharges.**

The requirements in Subsection O apply to stormwater discharges associated with industrial activity from Steam Electric Power Generating Facilities as identified by the Activity Code specified under Sector O in Table D-1 of Appendix D.

### **O.2 Industrial Activities Covered by Sector O.**

This permit authorizes stormwater discharges from the following industrial activities at Sector O facilities

O.2.1 steam electric power generation using coal, natural gas, oil, nuclear energy, etc., to produce a steam source, including coal handling areas;

O.2.2 coal pile runoff, including effluent limitations established by 40 CFR Part 423; and

O.2.3 dual fuel co-generation facilities.

### **O.3 Limitations on Coverage.**

O.3.1 Prohibition of Non-Stormwater Discharges. Non-stormwater discharges subject to effluent limitations guidelines are not covered by this permit.

O.3.2 Prohibition of Stormwater Discharges. The following are not covered by this permit: stormwater discharges from ancillary facilities (e.g., fleet centers, gas turbine stations and substations) that are not contiguous to a stream electric power generating facility and heat capture co-generation facilities.

### **O.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 in the permit.

O.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

O.4.2 Good Housekeeping Measures. (See also Part 2.1.5.1)

O.4.2.1 Fugitive Dust Emissions. Describe and implement measures that prevent or minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

O.4.2.2 Delivery Vehicles. Describe and implement measures that prevent or minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

O.4.2.3 Fuel Oil Unloading Areas. Describe and implement measures that prevent or minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider, at a minimum (or their equivalents), using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and

overflow protection (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

- O.4.2.4 Chemical Loading and Unloading. Describe and implement measures that prevent or minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider, at a minimum (or their equivalents), using containment curbs at chemical loading and unloading areas to contain spill, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.
- O.4.2.5 Miscellaneous Loading and Unloading Areas. Describe and implement measures that prevent or minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider, at a minimum, covering the loading area; grading, berming, or curbing around the loading area to divert runoff; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.
- O.4.2.6 Liquid Storage Tanks. Describe and implement measures that prevent or minimize contamination of surface runoff from above-ground liquid storage tanks. Consider, at a minimum, protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.
- O.4.2.7 Large Bulk Fuel Storage Tanks. Describe and implement measures that prevent or minimize contamination of surface runoff from large bulk fuel storage tanks. Consider, at a minimum, containment berms (or its equivalent). You must also comply with applicable State and Federal laws, including SPCC.
- O.4.2.8 Spill Reduction Measures. Describe and implement measures to reduce the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. At a minimum, visually inspect, on a weekly basis, the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment, and effect any necessary repairs immediately.
- O.4.2.9 Oil-Bearing Equipment in Switchyards. Describe and implement measures that prevent or minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

O.4.2.10 Residue-Hauling Vehicles. Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair, as soon as practicable, vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

O.4.2.11 Ash Loading Areas. Describe and implement procedures to reduce or control the tracking of ash and residue from ash loading areas. When practicable, clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

O.4.2.12 Areas Adjacent to Disposal Ponds or Landfills. Describe and implement measures that prevent or minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Develop procedures to reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

O.4.2.13 Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites.

Address these areas in your SWPPP and include appropriate BMPs as referred to in Part 2 of the permit.

O.4.2.14 Vehicle Maintenance Activities. For vehicle maintenance activities performed on the plant site, use the applicable BMPs outlined in Attachment 1, Subsection P.

O.4.2.15 Material Storage Areas. Describe and implement measures that prevent or minimize contamination of stormwater runoff from material storage areas (including areas used for temporary storage of miscellaneous products and construction materials stored in lay-down areas). Consider the following (or their equivalents): using flat yard grades; collecting runoff in graded swales or ditches; using erosion protection measures at steep outfall sites (e.g., concrete chutes, riprap, stilling basins); covering lay-down areas; storing materials indoors; and covering materials temporarily with polyethylene, polyurethane, polypropylene, or hypalon. Stormwater runoff may be minimized by constructing an enclosure or building a berm around the area.

O.4.3 Comprehensive Site Compliance Evaluation. (See also Part 3.1) As part of your evaluation, inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

**O.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Steam Electric Generating Facilities (Industrial Activity Code "SE")	Total Recoverable Iron	1.0 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection P - Sector P-Land Transportation and Warehousing**

**P.1 Covered Stormwater Discharges.**

The requirements in Subsection P apply to stormwater discharges associated with industrial activity from Land Transportation and Warehousing facilities as identified by the SIC Codes in Major Groups 40, 41, 42, 43 and SIC 5171, as specified under Sector P in Table D-1 of Appendix D of the permit, namely motor freight transportation facilities (SIC 4212-4231); passenger transportation facilities (SIC 4111-4173); petroleum bulk oil stations and terminals (SIC 5171); rail transportation facilities (SIC 4011, 4013); and United States Postal Service facilities (SIC 4311).

**P.2 Industrial Activities Covered by This Permit.**

The types of activities that Land Transportation and Warehousing facilities are primarily engaged in are vehicle and equipment fluid changes; mechanical repairs; parts cleaning; Sanding, refinishing and painting; fueling and lubrication; locomotive sanding (loading sand for traction); storage of vehicles and equipment waiting for repair or maintenance; storage of the related materials and waste materials, such as oil, fuel, batteries, tires, or oil filters; and equipment cleaning operations, including areas where the following types of activities take place: vehicle exterior wash down; interior trailer washouts; tank washouts; rinsing of transfer equipment.

**P.3 Limitation on Coverage**

P.3.1 Prohibited Discharges (see also Part 1.3.4 and P.4.6) This permit does not authorize the discharge of vehicle/equipment/surface washwater, including tank cleaning operations. Such discharges must be authorized under a separate NPDES permit, discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements, or recycled on-site.

#### **P.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the requirements contained in Part 2 of the permit, the following specific elements must be included in any SWPPP for a land transportation or warehousing facility authorized under this permit:

- P.4.1 Drainage Area Site Map. (See also Part 2.1.2) The site map must also identify the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.
- P.4.2 Potential Pollutant Sources. (See also Part 2.1.4) Describe and assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas.
- P.4.3 Good Housekeeping Measures. (See also Part 2.1.5.1) The SWPPP must describe the specific good housekeeping control measures used in each of the following facility areas. Recommended measures are discussed as indicated:
  - P.4.3.1 Vehicle and Equipment Storage Areas. Confine the storage of leaky or leak-prone vehicles/equipment awaiting maintenance to designated areas. Consider the following (or other equivalent measures): The use of drip pans under vehicles/equipment, indoor storage of vehicles and equipment, installation of berms or dikes, use of absorbents, roofing or covering storage areas, and cleaning pavement surfaces to remove oil and grease. Note: The discharge of vehicle and equipment washwater, including tank cleaning operations, are not authorized by this permit and must be covered under a separate NPDES permit or discharged to a sanitary sewer in accordance with applicable industrial pretreatment requirements.
  - P.4.3.2 Fueling Areas. Implement and describe measures that prevent or minimize contamination of stormwater runoff from fueling areas. Consider the following (or other equivalent measures): Covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.
  - P.4.3.3 Material Storage Areas. Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent

contamination of stormwater and plainly label them (e.g., “Used Oil,” “Spent Solvents,” etc.). Consider the following (or other equivalent measures): storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

- P.4.3.4 Vehicle and Equipment Cleaning Areas. Implement and describe measures that prevent or minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning. Consider the following (or other equivalent measures): performing all cleaning operations indoors; covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the stormwater drainage system unless NPDES permitted); treating and/or recycling collected stormwater runoff, or other equivalent measures.
- P.4.3.5 Vehicle and Equipment Maintenance Areas. Implement and describe measures that prevent or minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance. Consider the following (or other equivalent measures): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater runoff, minimizing run on/runoff of stormwater to maintenance areas.
- P.4.3.6 Locomotive Sanding (Loading Sand for Traction) Areas. Consider the following (or other equivalent measures): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.
- P.4.4 Inspections. (See also Part 2.1.5.6) Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.
- P.4.5 Employee Training. (See also Part 2.1.5.7) Train personnel at least once a year and address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.
- P.4.6 Vehicle and Equipment Washwater Requirements. Attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, attach a copy to your SWPPP. In any case, describe and implement all non-stormwater discharge permit conditions or

pretreatment conditions in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in the plan.

**P.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table P-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Land Transportation and Warehousing (SIC 4011, 4013, 4111-4173, 4212-4231, 4311, 5171)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection Q - Sector Q - Water Transportation**

**Q.1 Covered Stormwater Discharges.**

The requirements in Subsection Q apply to stormwater discharges associated with industrial activity from Water Transportation facilities as identified by the Activity Code specified under Sector Q in Table D-1 of Appendix D of the permit.

**Q.2 Industrial Activities Covered by Sector Q.**

The requirements listed under this part apply to stormwater discharges associated with the following activities

Q.2.1 water transportation facilities classified in SIC Code Major Group 44 that have vehicle (vessel) maintenance shops and/or equipment cleaning operations, including

Q.2.1.1 water transportation industry, including facilities engaged in foreign or domestic transport of freight or passengers in deep sea or inland waters;

Q.2.1.2 marine cargo handling operations;

Q.2.1.3 ferry operations;

Q.2.1.4 towing and tugboat services; and

Q.2.1.5marinas.

### **Q.3 Limitations on Coverage.**

Q.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) Not covered by this permit: bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels.

### **Q.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

Q.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

Q.4.2 Summary of Potential Pollutant Sources. (See also Part 2.1.4) Describe the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, painting.)

Q.4.3 Good Housekeeping Measures. (See also Part 2.1.5.1)

Q.4.3.1 Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharge water must be permitted by a separate NPDES permit. Describe the following in the SWPPP: the measures to collect or contain the discharges from the pressures washing area, the method for the removal of the visible solids, the methods of disposal of the collected solids, and where the discharge will be released.

Q.4.3.2 Blasting and Painting Area. Implement and describe measures to prevent spent abrasives, paint chips, and overspray from discharging into the receiving water or the storm sewer systems. Consider containing all blasting and painting activities or use other measures to prevent or minimize the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips. Detail in the SWPPP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or

prohibiting blasting and painting during windy conditions, which can render containment ineffective).

- Q.4.3.3 Material Storage Areas. Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Implement and describe measures to prevent or minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.
- Q.4.3.4 Engine Maintenance and Repair Areas. Implement and describe measures to prevent or minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.
- Q.4.3.5 Material Handling Area. Implement and describe measures to prevent or minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): 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 stormwater to material handling areas.
- Q.4.3.6 Drydock Activities. Describe your procedures for routinely maintaining and cleaning the drydock to prevent or minimize pollutants in stormwater runoff. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding and making absorbent materials and oil containment booms readily available to clean up or contain any spills.
- Q.4.3.7 General Yard Area. Implement and describe a schedule for routine yard maintenance and cleanup. Regularly remove from the general yard area scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc.

- Q.4.4 Preventive Maintenance. (See also Part 2.1.5.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.
- Q.4.5 Inspections. (See also Part 2.1.5.6) Include the following in all monthly inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.
- Q.4.6 Employee Training. (See also Part 2.1.5.7) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.
- Q.4.7 Comprehensive Site Compliance Evaluation. (See also Part 3.1) Conduct regularly scheduled evaluations at least once a year and address areas contributing to a stormwater discharge associated with industrial activity (e.g., pressure washing area, blasting and sanding areas, painting areas, material storage areas, engine maintenance and repair areas, material handling areas, and drydock area). Inspect these sources for evidence of, or the potential for, pollutants entering the drainage system.

**Q.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table Q-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Water Transportation Facilities (SIC 4412-4499)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Lead <sup>2</sup>	0.082 mg/L	--
	Total Recoverable Zinc <sup>3</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not

exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table Q-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20
225	0.23
250	0.26

<sup>3</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table Q-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
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100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

## **Subsection R - Sector R-Ship and Boat Building and Repair Yards**

### **R.1 Covered Stormwater Discharges.**

The requirements in Subsection R apply to stormwater discharges associated with industrial activity from ship and boat building and repair yards as identified by the Activity Codes specified under Sector R in Table D-1 of Appendix D of the permit.

### **R.2 Industrial Activities Covered by Sector R.**

Permittees under Sector R are primarily engaged in the following types of activities:

R.2.1 ship building and repairing and boat building and repairing<sup>1</sup>

### **R.3 Limitations on Coverage.**

R.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) Discharges containing bilge and ballast water, sanitary wastes, pressure wash water, and cooling water originating from vessels are not covered by this permit.

### **R.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

R.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas;

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<sup>1</sup>According to the U.S. Coast Guard, a vessel 65 feet or greater in length is referred to as a ship, and a vessel smaller than 65 feet is a boat.

liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

R.4.2 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, painting).

R.4.3 Good Housekeeping Measures. (See also Part 2.1.5.1)

R.4.3.1 Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.

R.4.3.2 Blasting and Painting Area. Implement and describe measures to prevent spent abrasives, paint chips, and overspray from discharging into the receiving water or the storm sewer systems. Consider containing all blasting and painting activities, or use other measures to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips. Detail in the SWPPP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

R.4.3.3 Material Storage Areas. Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Implement and describe measures to prevent or minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

R.4.3.4 Engine Maintenance and Repair Areas. Implement and describe measures to prevent or minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

- R.4.3.5 Material Handling Area. Implement and describe measures to prevent or minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater runoff to material handling areas.
- R.4.3.6 Drydock Activities. Describe your procedures for routinely maintaining and cleaning the drydock to prevent or minimize pollutants in stormwater runoff. Address the cleaning of accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding, and having absorbent materials and oil containment booms readily available to clean up and contain any spills.
- R.4.3.7 General Yard Area. Implement and describe a schedule for routine yard maintenance and cleanup. Regularly remove from the general yard area scrap metal, wood, plastic, miscellaneous trash, paper, glass, industrial scrap, insulation, welding rods, packaging, etc.
- R.4.4 Preventive Maintenance. (See also Part 2.1.5.3) As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.
- R.4.5 Inspections. (See also Part 2.1.5.6) Include the following in all monthly inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.
- R.4.6 Employee Training. (See also Part 2.1.5.7) As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.
- R.4.7 Comprehensive Site Compliance Evaluation. (See also Part 3.1) Conduct regularly

scheduled evaluations at least once a year and address areas contributing to a stormwater discharge associated with industrial activity (e.g., pressure washing, blasting and sanding, painting, material storage, engine maintenance and repair, material handling, and drydock areas). These areas must be visually inspected for evidence of, or the potential for, pollutants entering the drainage system.

**R.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table R-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Ship and Boat Building and Repairing Yards (SIC 3731, 3732)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection S - Sector S-Air Transportation**

**S.1 Covered Stormwater Discharges.**

The requirements in Subsection S apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes in Major Group 45, as specified under Sector S in Table D-1 of Appendix D of the permit, namely air transportation, scheduled, and air courier (SIC 4512 and 4513); air transportation, non scheduled (SIC 4522); airports, flying fields, except those maintained by aviation clubs, and airport terminal services including: air traffic control, except government; aircraft storage at airports; aircraft upholstery repair; airfreight handling at airports; airport hangar rental; airport leasing, if operating airport; airport terminal services; and hangar operations; and airport and aircraft service and maintenance including: aircraft cleaning and janitorial service; aircraft servicing/repairing, except on a factory basis; vehicle maintenance shops; material handling facilities; equipment clearing operations; and airport and aircraft deicing/anti-icing. (SIC 4581)

**S.2 Industrial Activities Covered by Sector S.**

The types of activities that Air Transportation facilities are primarily engaged in are:

- Servicing, repairing, or maintaining aircraft and ground vehicles
- Equipment cleaning and maintenance (including vehicle and equipment rehabilitation mechanical repairs, painting, fueling, and lubrication)
- Deicing/anti-icing operations which conduct the above described activities

Note: “deicing” will generally be used to imply both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

### **S.3 Limitation on Coverage**

- S.3.1 Limitations on Coverage. This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.
- S.3.2 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4 and Part S.4) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES permit(s).
- S.3.3 Hazardous Substances or Oil. (See also Part 2.1.4.3) Each individual permittee is required to report spills equal to or exceeding the reportable quantity (RQ) levels specified at 40 CFR 110, 117 and 302 as described at Part 2.1.4.3. If an airport authority is the sole permittee under this permit, then the sum total of all spills at the airport must be assessed against the RQ. If the airport authority is a co-permittee with other deicing operators at the airport (such as numerous different airlines), the assessed amount must be the summation of spills by each co-permittee. If separate, distinct individual permittees exist at the airport, then the amount spilled by each separate permittee must be the assessed amount for the RQ determination.

### **S.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the requirements contained in Part 2, the following specific elements must be included in any SWPPP for a air transportation facility authorized under this permit. An airport authority and tenants of the airport are encouraged to work in partnership in the development and implementation of a stormwater pollution prevention plan. If an airport tenant obtains authorization under this permit and develops a SWPPP for discharges from his own areas of the airport, that SWPPP must be coordinated and integrated with the plan SWPPP for the entire airport. Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity.

- S.4.1 Drainage Area Site Map. (See also Part 2.1.2) The site map must also identify the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage

areas for aircraft, ground vehicles and equipment awaiting maintenance.

S.4.2 Potential Pollutant Sources. (See also Part 2.1.4) In your inventory of exposed materials, describe and assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion in any comprehensive airport SWPPPs.

S.4.2.1 Deicing Season. (See also S.4.4.) The SWPPP must define the average seasonal timeframe (e.g., December- February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season.

S.4.3 Good Housekeeping Measures. (See also 2.1.5.1) The SWPPP must describe the specific good housekeeping control measures used in each of the following facility areas. Recommended measures are discussed as indicated:

S.4.3.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Describe and implement measures that prevent or minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangars). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

S.4.3.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. (see also S.4.6) Clean equipment only in the areas identified in the SWPPP and site map and clearly demarcate these areas on the ground using signage or other appropriate means. Describe and implement measures that prevent or minimize the contamination of stormwater runoff from cleaning areas.

S.4.3.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only.

Consider the following BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

- S.4.3.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., “used oil,” “Contaminated Jet A,” etc.). Describe and implement measures that prevent or minimize contamination of precipitation/runoff from these areas. Consider the following BMPs (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.
- S.4.3.5 Airport Fuel System and Fueling Areas. Describe and implement measures that prevent or minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following BMPs (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff.
- S.4.3.6 Source Reduction. Consider all feasible alternatives to the use of urea and glycol-based deicing chemicals to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; anhydrous sodium acetate.
- S.4.3.6.1 Runway Deicing Operation: Evaluate, at a minimum, whether over-application of deicing chemicals occurs by analyzing application rates and adjusting as necessary, consistent with considerations of flight safety. Also consider these BMP options (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup.
- S.4.3.6.2 Aircraft Deicing Operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. The Agency intends for this evaluation to be carried out by the personnel most familiar with the particular aircraft and flight operations in question (vice an outside entity such as the airport authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these BMP options (or their equivalents) for reducing deicing

fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, thermal blankets for MD-80s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

- S.4.3.7 Management of Runoff. Where deicing operations occur, describe and implement a program to control or manage contaminated runoff to reduce the amount of pollutants being discharged from the site. Describe the controls used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow. Consider these BMP options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system; using vacuum/collection trucks; storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of stormwater contamination. Used deicing fluid should be recycled whenever possible.
- S.4.4 Inspections. (See also Part 2.1.5.6) Specify the frequency of inspections in your SWPPP. At a minimum they must be conducted monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. Also, if significantly or deleteriously large quantities of deicing chemicals are being spilled or discharged, or if water quality impacts have been reported, increase the frequency of your inspections to weekly until such time as the chemical spills/discharges or impacts are reduced to acceptable levels. The Secretary may specifically require you to increase inspections and SWPPP reevaluations as necessary.
- S.4.5 Comprehensive Site Compliance Evaluation. (See also Part 3.1) Using only qualified personnel, conduct your annual site compliance evaluations during periods of actual deicing operations, if possible. If not practicable during active deicing or the weather is too inclement, conduct the evaluations when deicing operations are likely to occur and the materials and equipment for deicing are in place.
- S.4.6 Vehicle and Equipment Washwater Requirements. Attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, attach a copy to your SWPPP.

In any case, describe and implement all non-stormwater discharge permit conditions or pretreatment conditions in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in the plan.

**S.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

Monitor per the requirements in Table S-1. Collect a minimum of four (4) samples only during the timeframe defined in Part S.4.2.1 when deicing activities are occurring, for the year 1 of your permit coverage, and four times per year thereafter during the permit term, depending on comparison of monitoring results to benchmark monitoring cutoff concentrations.

<b>Table S-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Facilities at airports that use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis: monitor ONLY those outfalls from the airport facility that collect runoff from areas where deicing/anti-icing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD <sub>5</sub> )	30 mg/L	--
	Chemical Oxygen Demand (COD)	120 mg/L	--
	Ammonia	19 mg/L	--
	pH	6.0 - 9.0 s.u.	--
	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection T - Sector T-Treatment Works**

**T.1 Covered Stormwater Discharges.**

The requirements in Subsection T apply to stormwater discharges associated with industrial activity from treatment works as identified by the Activity Code specified under Sector T in Table D-1 of Appendix D of the permit.

**T.2 Industrial Activities Covered by Sector T.**

The requirements listed under this part apply to all existing point source stormwater discharges associated with the following activities

- T.2.1 treatment works treating domestic sewage, or any other sewage sludge or wastewater treatment device or system used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage; including land dedicated to the disposal of sewage sludge; that are located within the confines of the facility with a design flow of 1.0 million gallons per day (MGD) or more; or are required to have an approved pretreatment program under 40 CFR Part 403.
- T.2.2 The following are not required to have permit coverage: farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located within the facility, or areas that are in compliance with Section 405 of the CWA.

### **T.3 Limitations on Coverage.**

- T.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) Sanitary and industrial wastewater and equipment and vehicle washwater are not authorized by this permit.

### **T.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- T.4.1 Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.
- T.4.2 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.
- T.4.3 Best Management Practices (BMPs). (See also Part 2.1.5) In addition to the other BMPs, consider the following: routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).
- T.4.4 Inspections. (See also Part 2.1.5.6) Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste

receiving station.

T.4.5 Employee Training. (See also Part 2.1.5.7) At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

T.4.6 Wastewater and Washwater Requirements. Attach to your SWPPP a copy of all your current NPDES permits issued for wastewater and industrial, vehicle, and equipment washwater discharges or, if an NPDES permit has not yet been issued, a copy of the pending applications. Address any requirements and conditions from the other permits, as appropriate, in the SWPPP. If the washwater is handled in another manner, the disposal method must be described and all pertinent documentation must be attached to the plan.

**T.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table T-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Treatment Works (SIC TW)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection U - Sector U-Food and Kindred Products**

**U.1 Covered Stormwater Discharges.**

The requirements in Subsection U apply to stormwater discharges associated with industrial activity from food and kindred products facilities as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

**U.2 Industrial Activities Covered by Sector U.**

Permittees under Sector U are primarily engaged in the following types of activities:

U.2.1 meat products;

- U.2.2 dairy products;
- U.2.3 canned, frozen, and preserved fruits, vegetables, and food specialties;
- U.2.4 grain mill products;
- U.2.5 bakery products;
- U.2.6 sugar and confectionery products;
- U.2.7 fats and oils;
- U.2.8 beverages; and
- U.2.9 miscellaneous food preparations and kindred products and tobacco products manufacturing.

### **U.3 Limitations on Coverage.**

The following are not covered by this permit: stormwater discharges identified under Part 1.3.4 from industrial plant yards; material handling sites; refuse sites; sites used for application or disposal of process wastewaters; sites used for storage and maintenance of material handling equipment; sites used for residential wastewater treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; and storage areas for raw material and intermediate and finished products. This includes areas where industrial activity has taken place in the past and significant materials remain. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product.

- U.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) The following are not authorized by this permit: discharges subject to Part 1.3.2.2, which includes discharges containing boiler blowdown, cooling tower overflow and blowdown, ammonia refrigeration purging, and vehicle washing and clean-out operations.

### **U.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- U.4.1 Drainage Area Site Map. (See also Part 2.1.2) Identify the locations of the following activities if they are exposed to precipitation or runoff: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

U.4.2 Potential Pollutant Sources. (See also Part 2.1.4) Describe, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

U.4.3 Inspections. (See also Part 2.1.5.6) Inspect on a monthly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

U.4.4 Employee Training. (See also Part 2.1.5.7) Address pest control in the training program.

**U.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Subsector (Discharges may be subject to requirements for more than one Sector / Subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Grain Mill Products (SIC 2041-2048)	Total Suspended Solids (TSS)	100 mg/L	--
Fats and Oils Products (SIC 2074-2079)	Biochemical Oxygen Demand (BOD <sub>5</sub> )	30 mg/L	--
	Chemical Oxygen Demand (COD)	120 mg/L	--
	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Meat Products; Dairy Products; Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties; Bakery Products; Sugar and Confectionery Products; Beverages; Miscellaneous Food Preparations and Kindred Products; and Tobacco Products (SIC 2011-2015, 2021-2026, 2032-2038, 2051-2053, 2061-2068, 2082-2087, 2091-2099, 2111-2141)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

## **Subsection V - Sector V-Textile Mills, Apparel, and Other Fabric Products**

### **V.1 Covered Stormwater Discharges.**

The requirements in Subsection V apply to stormwater discharges associated with industrial activity from textile mills, apparel, and other fabric product manufacturing as identified by the Activity Code specified under Sector V in Table D-1 of Appendix D of the permit.

### **V.2 Industrial Activities Covered by Sector V.**

Permittees under Sector V are primarily engaged in the following types of activities:

- V.2.1 textile mill product preparation, including preparation of fiber and subsequent manufacturing of yarn, thread, braids, twine, and cordage; and the manufacture of broadwoven fabrics, narrow-woven fabrics, knit fabrics, and carpets and rugs from yarn;
- V.2.2 processes involved in the dyeing and finishing of fibers, yarn fabrics, and knit apparel;
- V.2.3 integrated manufacturing of knit apparel and other finished articles of yarn;
- V.2.4 manufacturing of felt goods (e.g., wool), lace goods, non-woven fabrics, miscellaneous textiles, and other apparel products.

### **V.3 Limitations on Coverage.**

- V.3.1 Prohibition of Non-Stormwater Discharges. (See also Part 1.3.4) The following are not authorized by this permit: discharges of wastewater (e.g., wastewater resulting from wet processing or from any processes relating to the production process), reused or recycled water, and waters used in cooling towers. If you have these types of discharges from your facility, you must cover them under a separate NPDES permit.

### **V.4 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 4 of the permit.

- V.4.1 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following additional sources and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing,

drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

#### V.4.2 Good Housekeeping Measures. (See also Part 2.1.5.1)

V.4.2.1 Material Storage Areas. Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Describe and implement measures that prevent or minimize contamination of the stormwater runoff from such storage areas, including a description of the containment area or enclosure for those materials stored outdoors. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with precipitation or runoff. Collect and dispose of washwater from these cleanings properly.

V.4.2.2 Material Handling Areas. Describe and implement measures that prevent or minimize contamination of stormwater runoff from material handling operations and areas. Consider the following (or their equivalents): use of spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals, dyes, or wastewater.

V.4.2.3 Fueling Areas. Describe and implement measures that prevent or minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

V.4.2.4 Above-Ground Storage Tank Area. Describe and implement measures that prevent or minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regular cleanup of these areas; preparing the SPCC program to provide spill and overflow protection; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

V.4.3 Inspections. (See also Part 2.1.5.6) Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good

housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

V.4.4 Employee Training. (See also Part 2.1.5.7) As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

V.4.5 Comprehensive Site Compliance Evaluation. (See also Part 3.1) Conduct regularly scheduled evaluations at least once a year, and address those areas contributing to a stormwater discharge associated with industrial activity for evidence of, or the potential for, pollutants entering the drainage system. Inspect, at a minimum, as appropriate: storage tank areas, waste disposal and storage areas, dumpsters and open containers stored outside, materials storage areas, engine maintenance and repair areas, and material handling areas and loading dock areas.

**V.5 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table V-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Textile Mills, Apparel, and Other Fabric Product Manufacturing; and Leather and Leather Products (SIC 2211-2299, 2311-2399, 3131-3199, except 3111)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection W - Sector W-Furniture and Fixtures**

**W.1 Covered Stormwater Discharges.**

The requirements in Subsection W apply to stormwater discharges associated with industrial activity from furniture and fixtures facilities as identified by the Activity Code specified under Sector W in Table D-1 of Appendix D of the permit.

**W.2 Industrial Activities Covered by Sector W.**

Permittees under Sector W are primarily engaged in are the manufacturing of the following types of products:

W.2.1 wood kitchen cabinets;

W.2.2 household furniture;

W.2.3 office furniture;

W.2.4 public buildings and related furniture;

W.2.5 partitions, shelving, lockers, and office and store fixtures; and

W.2.6 miscellaneous furniture and fixtures.

**W.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of this permit.

W.3.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: material storage (including tanks or other vessels used for liquid or waste storage) areas; outdoor material processing areas; areas where wastes are treated, stored, or disposed of; access roads; and rail spurs.

**W.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table W-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Furniture and Fixtures (SIC 2434, 2511-2599)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection X - Sector X-Printing and Publishing**

**X.1 Covered Stormwater Discharges.**

The requirements in Subsection X apply to stormwater discharges associated with industrial activity from printing and publishing facilities as identified by the Activity Code specified under Sector X in Table D-1 of Appendix D of the permit.

## **X.2 Industrial Activities Covered by Sector X**

Permittees under Sector X are primarily engaged in the following types of activities:

- X.2.1 book printing;
- X.2.2 commercial printing and lithographics;
- X.2.3 platemaking and related services;
- X.2.4 commercial printing, gravure; and
- X.2.5 commercial printing not elsewhere classified.

## **X.3 Stormwater Pollution Prevention Plan Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

- X.3.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: above-ground storage tanks, drums, and barrels permanently stored outside.
- X.3.2 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following additional sources and activities that have potential pollutants associated with them, as applicable: loading and unloading operations, outdoor storage activities, significant dust or particulate generating processes, and onsite waste disposal practices (e.g., blanket wash). Also identify the pollutant or pollutant parameter (e.g., oil and grease, scrap metal) associated with each pollutant source.
- X.3.3 Good Housekeeping Measures. (See also Part 2.1.5.1)
  - X.3.3.1 Material Storage Areas. Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, fuel oil) in a protected area, away from drains. Describe and implement measures that prevent or minimize contamination of the stormwater runoff from such storage areas, including a description of the containment area or enclosure for those materials stored outdoors. Also consider an inventory control plan to prevent

excessive purchasing of potentially hazardous substances.

X.3.3.2 Material Handling Area. Describe and implement measures that prevent or minimize contamination of stormwater runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials). Consider the following (or their equivalents): using spill and overflow protection, covering fueling areas, and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

X.3.3.3 Fueling Areas. Describe and implement measures that prevent or minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

X.3.3.4 Above Ground Storage Tank Area. Describe and implement measures that prevent or minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regularly cleaning these areas, preparing the SPCC program, providing spill and overflow protection, minimizing stormwater runoff from adjacent areas, restricting access to the area, inserting filters in adjacent catch basins, providing absorbent booms in unbermed fueling areas, using dry cleanup methods, and permanently sealing drains within critical areas that may discharge to a storm drain.

X.3.4 Employee Training. (See also Part 2.1.5.7) As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

**X.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table X-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Printing and Publishing (SIC 2711-2796)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not

exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

## **Subsection Y - Sector Y-Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.**

### **Y.1 Covered Stormwater Discharges.**

The requirements in Subsection Y apply to stormwater discharges associated with industrial activity from rubber, miscellaneous plastic products, and miscellaneous manufacturing industries facilities as identified by the SIC Codes specified under Sector Y in Table D-1 of Appendix D of the permit.

### **Y.2 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

Y.2.1 Potential Pollutant Sources for Rubber Manufacturers. (See also Part 2.1.4) Review the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater runoff.

Y.2.2 Controls for Rubber Manufacturers. (See also Part 2.1.5) Describe and implement specific controls to minimize the discharge of zinc in your stormwater discharges. Parts Y.2.2.1 to Y.2.2.5 give possible sources of zinc to be reviewed and list some specific BMPs to be considered for implementation (or their equivalents). Following are some general BMP options to consider: using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize “puffing” losses when the container is opened, and using automatic dispensing and weighing equipment.

Y.2.2.1 Inadequate Housekeeping. Review the handling and storage of zinc bags at your facility. Following are some BMP options: employee training on the handling and storage of zinc bags, indoor storage of zinc bags, cleanup of zinc spills without washing the zinc into the storm drain, and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

Y.2.2.2 Dumpsters. Reduce discharges of zinc from dumpsters. Following are some BMP options: covering the dumpster, moving the dumpster indoors, or providing a lining for the dumpster.

Y.2.2.3 Malfunctioning Dust Collectors or Baghouses. Review dust collectors or

baghouses as possible sources in zinc in stormwater runoff. Replace or repair, as appropriate, improperly operating dust collectors or baghouses.

Y.2.2.4 Grinding Operations. Review dust generation from rubber grinding operations and, as appropriate, install a dust collection system.

Y.2.2.5 Zinc Stearate Coating Operations. Detail appropriate measures to prevent or clean up drips and spills of zinc stearate slurry that may be released to the storm drain. One BMP option is to use alternative compounds to zinc stearate.

Y.2.3 Controls for Plastic Products Manufacturers. Describe and implement specific controls to minimize the discharge of plastic resin pellets in your stormwater discharges. BMPs to be considered for implementation (or their equivalents) include minimizing spills, cleaning up of spills promptly and thoroughly, sweeping thoroughly, pellet capturing, employee education, and disposal precautions.

**Y.3 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table Y-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Tires and Inner Tubes; Rubber Footwear; Gaskets, Packing and Sealing Devices; and Rubber Hose and Belting; and Fabricated Rubber Products, Not Elsewhere Classified (SIC 3011-3069, rubber manufacturing only)	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
	Total Recoverable Lead <sup>3</sup>	0.082 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
Miscellaneous Plastics Products (SIC 3081-3089); Musical Instruments (SIC 3931); Dolls, Toys, Games and Sporting and Athletic Goods (SIC 3942-3949); Pens, Pencils, and other Artists' Materials (SIC 3951-3955, except 3952 as Specified in Sector C); Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal (SIC 3961, 3965); and Miscellaneous Manufacturing Industries (SIC 3991-3999)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table Y-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

<sup>3</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table Y-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11

150	0.14
175	0.17
200	0.20
225	0.23
250	0.26

## **Subsection Z - Sector Z-Leather Tanning and Finishing**

### **Z.1 Covered Stormwater Discharges.**

The requirements in Subsection Z apply to stormwater discharges associated with industrial activity from leather tanning and finishing facilities as identified by the Activity Code specified under Sector Z in Table D-1 of Appendix D of the permit.

### **Z.2 Industrial Activities Covered by Sector Z.**

Permittees under Sector Z are primarily engaged in leather tanning, currying, and finishing activities.

### **Z.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

Z.3.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations; and haul roads, access roads, and rail spurs.

Z.3.2 Potential Pollutant Sources. (See also Part 2.1.4) At a minimum, describe the following additional sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings; chemical drums, bags, containers, and above-ground tanks; empty chemical containers and bags; spent solvents; floor sweepings and washings; refuse, waste piles, and sludge; and significant dust/particulate generating processes (e.g., buffing).

Z.3.3 Good Housekeeping Measures. (See also Part 2.1.5.1)

Z.3.3.1 Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products. Pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings) should be stored indoors or protected by

polyethylene wrapping, tarpaulins, roofed storage, etc. Consider placing materials on an impermeable surface and enclosing or putting berms (or equivalent measures) around the area to prevent stormwater runoff and runoff.

- Z.3.3.2 **Material Storage Areas.** Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials). Describe and implement measures that prevent or minimize contact with stormwater.
- Z.3.3.3 **Buffing and Shaving Areas.** Describe and implement measures that prevent or minimize contamination of stormwater runoff with leather dust from buffing and shaving areas. Consider dust collection enclosures, preventive inspection and maintenance programs, or other appropriate preventive measures.
- Z.3.3.4 **Receiving, Unloading, and Storage Areas.** Describe and implement measures that prevent or minimize contamination of stormwater runoff from receiving, unloading, and storage areas. If these areas are exposed, consider the following (or their equivalents): covering all hides and chemical supplies, diverting drainage to the process sewer, or grade berming or curbing the area to prevent stormwater runoff.
- Z.3.3.5 **Outdoor Storage of Contaminated Equipment.** Describe and implement measures that prevent or minimize contact of stormwater with contaminated equipment. Consider the following (or their equivalents): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.
- Z.3.3.6 **Waste Management.** Describe and implement measures that prevent or minimize contamination of stormwater runoff from waste storage areas. Consider the following (or their equivalents): establishing inspection and maintenance programs for leaking containers or spills, covering dumpsters, moving waste management activities indoors, covering waste piles with temporary covering material such as tarpaulins or polyethylene, and minimizing stormwater runoff by enclosing the area or building berms around the area.

**Z.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table Z-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Leather Tanning and Finishing (SIC 3111)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For

each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

## **Subsection AA - Sector AA-Fabricated Metal Products.**

### **AA.1 Covered Stormwater Discharges.**

The requirements in Subsection AA apply to stormwater discharges associated with industrial activity from fabricated metal products facilities as identified by the Activity Code specified under Sector AA in Table D-1 of Appendix D of the permit.

### **AA.2 Industrial Activities Covered by Sector AA.**

Permittees under Sector AA are primarily engaged in the following types of activities:

AA.2.1 fabricated metal products; except for electrical related industries;

AA.2.2 fabricated metal products; except machinery and transportation equipment; and

AA.2.3 jewelry, silverware, and plated ware.

### **AA.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

AA.3.1 Drainage Area Site Map. (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: raw metal storage areas; finished metal storage areas; scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

AA.3.2 Spills and Leaks. (See also Part 2.1.4.3) When listing significant spills and leaks, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

AA.3.3 Potential Pollutant Sources. (See also Part 2.1.4) Describe the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities

for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

#### AA.3.4 Good Housekeeping Measures. (See also Part 2.1.5.1)

AA.3.4.1 Raw Steel Handling Storage. Describe and implement measures for controlling or recovering scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

AA.3.4.2 Paints and Painting Equipment. Describe and implement measures to prevent or minimize exposure of paint and painting equipment to stormwater.

#### AA.3.5 Spill Prevention and Response Procedures. (See also Part 2.1.5.5) Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed

AA.3.5.1 Metal Fabricating Areas. Describe and implement measures for maintaining clean, dry, orderly conditions in these areas. Consider using dry clean-up techniques.

AA.3.5.2 Storage Areas for Raw Metal. Describe and implement measures to keep these areas free of conditions that could cause spills or leakage of materials. Consider the following (or their equivalents): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

AA.3.5.3 Receiving, Unloading, and Storage Areas. Describe and implement measures to prevent spills and leaks, plan for quick remedial clean up, and instruct employees on clean-up techniques and procedures.

AA.3.5.4 Storage of Equipment. Describe and implement measures for preparing equipment for storage and the proper storage of equipment. Consider the following (or their equivalents): protecting equipment with covers, storing equipment indoors, and cleaning potential pollutants from equipment to be stored outdoors.

AA.3.5.5 Metal Working Fluid Storage Areas. Describe and implement measures for storage of metal working fluids.

AA.3.5.6 Cleaners and Rinse Water. Describe and implement measures to control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable

wastes. Substitute environmentally benign cleaners when possible.

AA.3.5.7 Lubricating Oil and Hydraulic Fluid Operations. Consider using monitoring equipment or other devices to detect and control leaks and overflows. Consider installing perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures.

AA.3.5.8 Chemical Storage Areas. Describe and implement proper storage methods that prevent stormwater contamination and accidental spillage. Include a program to inspect containers and identify proper disposal methods.

AA.3.6 Inspections. (See also Part 2.1.5.6) At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, and vehicle fueling and maintenance areas.

AA.3.7 Comprehensive Site Compliance Evaluation. (See also Part 3.1) As part of your evaluation, also inspect areas associated with the storage of raw metals, spent solvents and chemicals storage areas, outdoor paint areas, and drainage from roof. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

**AA.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table AA-1. Sector-specific Numeric Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Recoverable Aluminum	0.75 mg/L	--
	Total Recoverable Iron	1.0 mg/L	--
	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--
Fabricated Metal Coating and Engraving (SIC 3479)	Total Recoverable Zinc <sup>2</sup>	0.12 mg/L	--
	Total Suspended Solids (TSS)	100 mg/L	--
	Nitrate plus Nitrite Nitrogen	0.68 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of zinc is determined as a function of hardness (in units of mg/L) in the water column. The

value given in Table AA-1 (i.e. 0.12 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for zinc:

$$\text{Benchmark} = (e^{[(0.8473)(\ln \text{hardness}) + 0.884]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.8473)(\ln 175) + 0.884]})/1000 \\ &= (e^{5.26})/1000 \\ &= 192.51/1000 \\ &= 0.19 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for zinc:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.12
125	0.14
150	0.17
175	0.19
200	0.22
225	0.24
250	0.26

## **Subsection AB - Sector AB-Transportation Equipment, Industrial and Commercial Machinery**

### **AB.1 Covered Stormwater Discharges.**

The requirements in Subsection AB apply to stormwater discharges associated with industrial activity from transportation equipment, industrial or commercial machinery facilities as identified by the Activity Code specified under Sector AB in Table D-1 of Appendix D of the permit.

### **AB.2 Industrial Activities Covered by Sector AB.**

Permittees under Sector AB are primarily engaged in the following types of activities:

AB.2.1 Industrial and commercial machinery (except computer and office equipment) (see Sector AC) and

AB.2.2 Transportation equipment (except ship and boat building and repairing) (see Sector R);

### **AB.3 Stormwater Pollution Plan (SWPPP) Requirements.**

In addition to the following requirements, you must also comply with the requirements listed in Part 2 of the permit.

**AB.3.1 Drainage Area Site Map.** (See also Part 2.1.2) Identify where any of the following may be exposed to precipitation or surface runoff: vents and stacks from metal processing and similar operations.

**AB.3.2 Non-Stormwater Discharges.** (See also Part 2.1.4.5) If your facility has a separate NPDES permit (or has applied for a permit) authorizing discharges of wastewater, attach a copy of the permit (or the application) to your SWPPP. Any new wastewater permits issued or reissued to you must then replace the old one in your SWPPP. If you discharge wastewater, other than solely domestic wastewater, to a Publicly Owned Treatment Works (POTW), you must notify the POTW of the discharge (identify the types of wastewater discharged, including any stormwater). As proof of this notification, attach to your SWPPP a copy of the permit issued to your facility by the POTW or a copy of your notification to the POTW.

**AB.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table AB-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Transportation Equipment, Industrial, or Commercial Machinery (SIC 3511-3599, except 3571-3579, 3711-3799, except 3731 and 3732)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

**Subsection AC - Sector AC-Electronic and Electrical Equipment and Components, Photographic and Optical Goods.**

**AC.1 Covered Stormwater Discharges.**

The requirements in Subsection AC apply to stormwater discharges associated with industrial activity from facilities that manufacture electronic and electrical equipment and components, photographic and optical goods as identified by the SIC Codes specified in Table D-1 of Appendix D of the permit.

## AC.2 Industrial Activities Covered by Sector AC.

Permittees under Sector AC are primarily engaged in the manufacturing of the following types of products:

AC.2.1 measuring, analyzing, and controlling instruments;

AC.2.2 photographic, medical, and optical goods;

AC.2.3 watches and clocks;

AC.2.4 computer and office equipment; and

AC.2.5 electrical and electronic equipment and components.

## AC.3 Stormwater Pollution Prevention Plan (SWPPP) Requirements.

No additional sector-specific requirements apply.

## AC.4 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)

<b>Table AC-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Electronic, Electrical, Photographic, and Optical Goods (SIC 3571-3579, 3812-3873)	Total Suspended Solids (TSS)	100 mg/L	--
Electronic and Electrical Equipment and Components, except Computers (SIC 3612-3699)	Total Suspended Solids (TSS)	100 mg/L	--
	Total Recoverable Copper <sup>2</sup>	0.014 mg/L	--
	Total Recoverable Lead <sup>3</sup>	0.082 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

<sup>2</sup> The benchmark value of copper is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table AC-1 (i.e. 0.014 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the

benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for copper:

$$\text{Benchmark} = (e^{[(0.9422)(\ln \text{hardness}) - 1.700]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(0.9422)(\ln 175) - 1.700]})/1000 \\ &= (e^{3.166})/1000 \\ &= 23.72/1000 \\ &= 0.024 \text{ mg/L} \end{aligned}$$

*The following are example benchmark values for copper:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.014
125	0.017
150	0.021
175	0.024
200	0.027
225	0.030
250	0.033

<sup>3</sup> The benchmark value of lead is determined as a function of hardness (in units of mg/L) in the water column. The value given in Table AC-1 (i.e. 0.082 mg/L) corresponds to a hardness of 100 mg/L and should be used if you either did not analyze water hardness, other hardness data are not available, or the water hardness is less than 100 mg/L. If a laboratory analysis indicates that the water hardness is below 100 mg/L, then you should use the benchmark for 100 mg/L. If a laboratory analysis indicates that the water hardness is greater than 100 mg/L, then the following equation may be used to determine the benchmark value for lead:

$$\text{Benchmark} = (e^{[(1.273)(\ln \text{hardness}) - 1.460]})/1000$$

*Example:* Laboratory analysis of your water sample indicates the hardness is 175 mg/L.

$$\begin{aligned} \text{Benchmark} &= (e^{[(1.273)(\ln 175) - 1.460]})/1000 \\ &= (e^{5.1148})/1000 \\ &= 166.46/1000 \\ &= 0.17 \text{ mg/L} \end{aligned}$$

*The following are example benchmark value for lead:*

<u>Hardness (mg/L)</u>	<u>Benchmark value (mg/L)</u>
100	0.082
125	0.11
150	0.14
175	0.17
200	0.20

225	0.23
250	0.26

**Subsection AD - Sector AD-Stormwater Discharges Designated by the Secretary as Requiring Permits.**

**AD.1 Covered Stormwater Discharges.**

Sector AD is used to provide permit coverage for facilities designated by the Secretary as needing a stormwater permit, and any discharges of stormwater associated with industrial activity that do not meet the description of an industrial activity covered by Sectors A-AC.

AD.1.1 Eligibility for Permit Coverage. Because this sector is primarily intended for use by discharges designated by the Secretary as needing a stormwater permit (which is an atypical circumstance), and your facility may or may not normally be discharging stormwater associated with industrial activity, you must obtain the Secretary’s written permission to use this permit prior to submitting an NOI. If you are authorized to use this permit, you will still be required to ensure that your discharges meet the basic eligibility provisions of this permit at Part 1.2.

**AD.2 Stormwater Pollution Prevention Plan (SWPPP) Requirements.**

The Secretary will establish any additional site specific SWPPP requirements for your facility above and beyond those found in Part 2 prior to authorizing you to be covered by this permit. Additional requirements necessary for protection of water quality or compliance with the Act would be based on the nature of activities at your facility and your stormwater discharges.

**AD.3 Monitoring and Reporting Requirements. (See also Part 3 of the permit.)**

<b>Table AD-1. Sector-specific Numeric Effluent Limitations and Benchmark Monitoring</b>			
<b>Subsector (Discharges may be subject to requirements for more than one sector/subsector)</b>	<b>Parameter</b>	<b>Benchmark Monitoring Concentration<sup>1</sup></b>	<b>Effluent Limit Guidelines</b>
Non-Classified Facilities, Others (SIC N/A)	Total Suspended Solids (TSS)	100 mg/L	--

<sup>1</sup>You must monitor quarterly in the first year of your coverage for each benchmark parameter (see Part 3.2.2.1). For each parameter, no additional benchmark monitoring is required if the average of your 4 monitoring values does not exceed the benchmark (see Part 3.2.2.3). However, for each parameter there are additional requirements if the average of your four monitoring values exceeds the benchmark (see Part 3.2.2.4).

The Secretary will establish any additional monitoring and reporting requirements for your facility prior to authorizing you to be covered by this permit. Additional monitoring requirements would be based on the nature of activities at your facility and your stormwater discharges.