

## **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	
	--	0.019 mg/L, monthly avg. 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>	
	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	
	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

<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>
		--	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
250	0.26

<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.

$$\text{Benchmark} = (e^{[(1.72)(\ln 175) - 6.59]})/1000$$

$$\begin{aligned} &= (e^{2.293})/1000 \\ &= 9.909/1000 \\ &= 0.0099 \text{ mg/L} \end{aligned}$$

*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