Kodak
Environmental Information

Environmental Information from Kodak

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Requirements for Industrial Sewer Discharges Containing Hazardous Waste

The Federal Environmental Protection Agency (EPA) places requirements, under the Clean Water Act, on the discharge of industrial wastes such as photoprocessing effluents into municipal sewer systems. Photoprocessing wastes that may be characterized as "hazardous wastes" under the Resource Conservation and Recovery Act (RCRA) are discussed here. These wastes may be hazardous due to the characteristics of corrosivity or toxicity.

Which photoprocessing wastes are affected?

- Photoprocessing effluents that, at the point of entry into the municipal sewer system, contain silver concentrations of 5 ppm or greater. Processing solutions that could trigger this include untreated fixers, bleach-fixes, reversal bleaches and stabilizers used in plumbingless minilabs. Most photoprocessors recover silver from bleach-fixes and fixers.
- Photoprocessing effluents and chemical cleaners that, at the point of entry into the municipal sewer system, contain chromium concentrations of 5 ppm or greater. Processing solutions or chemicals that could trigger this include some reversal bleaches* and system cleaners*.
- Photoprocessing effluents and chemicals that, at the point of entry into the municipal sewer system, have corrosive characteristics. A corrosive hazardous waste is defined as being aqueous and having a pH less than or equal to 2 or greater than or equal to 12.5. Also, wastes that are liquid and corrode steel at a rate of 6.35 mm per year or more at 55° C would be considered corrosive wastes. Processing solutions and chemicals that could be hazardous wastes due to corrosivity include stop baths, acid regenerants, system cleaners and photographic activators. Almost all such solutions are diluted with other effluents before they enter the sewer system. The pH of the resulting mixture is almost always within the acceptable range. Corrosivity to steel may have to be determined to assess whether the waste entering the sewer system should carry the waste code D002.

See Table 1. Maximum Concentration of Contaminants for the Toxicity Characteristics for EPA's listing for corrosivity and toxicity characteristics.

What are the requirements placed on the discharge of industrial wastes into municipal sewer systems?

A written one-time notification requirement if the facility (i.e., photoprocessing laboratory) is discharging wastewater that has hazardous waste characteristics at the point of entry into the municipal sewer system.

Who must be notified?

1. The municipal sewer authority into which the facility is discharging
2. The Federal EPA Regional Waste Management Division Director
3. The state hazardous waste authorities

The addresses for the state and federal EPA contacts can be found at:
http://www.epa.gov/epahome/locate2.html

When must notification take place?

Users of municipal sewer systems who discharge waste streams characterized as RCRA hazardous wastes at the point of entry into the municipal sewer system must submit notification within 180 days from the initial date of discharge.

Are there any exemptions?

Yes, if the discharge is less than 15 Kg per month (approximately 4 gallons) of hazardous waste, unless the wastes are acute hazardous wastes. Photoprocessing wastes generally do not fall under the acute category. However, state and local sewer authorities can have more stringent regulations that may not allow for exemptions.

* Review the Material Safety Data Sheet(s) for the product to determine if these compounds are present.

What are the written notification requirements?

If the discharge is more than 15 Kg per month and less than 100 Kg per month (approximately 4 to 26 gallons) of hazardous waste, the notification must include:

- The name of the waste(s) discharged
- Type of discharge (i.e. batch, continuous, etc.)
- EPA hazardous waste number (see Appendix A)
- Certification that the photoprocessing facility has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined it to be economically practical

If the discharge is more than 100 Kg (approximately 26 gallons) of hazardous waste per month, the notification must include:

- All the requirements above, plus the words "to the extent the information is known and readily available"
- An identification of the hazardous constituents contained of the waste
- An estimation of the mass and concentration of the constituents in the wastestream discharged during a calendar month, and
- An estimation of the mass of constituents to be discharged during the following 12 months

If the photoprocessing facility is considered to be or is designated by the municipal sewer authority as a Significant Industrial User (discharges an average of 25,000 gallons per day, or more, of process wastewater, or contributes a process wastestream that makes up 5% or more of the average dry weather hydraulic or organic capacity of the municipal sewage plant), the notification must also include the requirement that:

- The discharger must report to the local sewer authority at least every 6 months a description of the nature, concentration and flow of pollutants as required by the sewer authority

Do photoprocessors have a recourse?

Yes, you can avoid notification if you properly manage your wastes other than discharging them to the municipal sewer. For example, if you provide adequate silver recovery to keep the silver in the effluent discharged to the municipal sewer below 5 ppm, you do not need to report. You may choose to manage cleaners and bleaches that contain chromium by collecting and disposing of them off-site according to federal and state hazardous waste regulations, or use chromium-free materials. Further, the federal regulations as well as most state regulations allow neutralization of wastes, corrosive due to pH, in tanks and containers without a permit.

How do you know if the photoprocessing waste contains hazardous waste?

The lab should be familiar with its wastewater characteristics, thereby being able to determine if the waste discharged is in compliance with local pretreatment regulations. Alternatively, a representative sample of your wastewater may be collected and analyzed by a state certified analytical lab; however, this is not a requirement of this federal EPA regulation.

What if I need more help?

If you or your customers need additional information or assistance with recovery and treatment technologies, contact the Eastman Kodak Company Environmental Hot-Line at (585) 477-3194. These federal EPA regulations may be found in Title 40 Part 403, of the Code of Federal Regulations.

Table 1. Maximum Concentration of Contaminants for the Toxicity Characteristics

EPA HW No.*	Contaminant	CAS No.†	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	200.0
D024	m-Cresol	108-39-4	200.0
D025	p-Cresol	106-44-5	200.0
D026	Cresol		200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

* Hazardous waste numbers.
† Source: 40 CFR Part 261.24

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