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## *Environmental Permitting Fact Sheet*

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### **General Permit for the Discharge of Wastewaters from Significant Industrial Users (SIU)**

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#### **Permit Overview**

This general permit is issued under the authority of, and administered by the Department of Energy and Environmental Protection's (DEEP) Bureau of Materials Management and Compliance Assurance, Water Permitting and Enforcement Division. DEEP uses both individual and general permits to regulate wastewater discharge activities. Individual permits are issued directly to an applicant, whereas general permits are issued to authorize similar activities by one or more applicants throughout a prescribed geographic area. Authorization of an activity under a general permit is governed by that general permit. A general permit sets terms and conditions for conducting an activity which, when complied with, are protective of the environment. General permits represent a streamlined process to permit specific activities and are more cost-effective for both the DEEP and the registrant.

This general permit applies to Significant Industrial Users which discharge metal finishing wastewater, process, or non-process wastewater to a Publicly Owned Treatment Works (POTWs) either via the sanitary sewer or a properly licensed waste transporter.

*“Significant Industrial User (SIU)”* means:

- (1)(i) all Industrial Users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and
- (ii) any other Industrial User that: discharges a cumulative maximum of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW Treatment plant; or is designated as such by the commissioner on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's operation or for violating any Pretreatment Standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

*“Process Wastewater”* means any wastewater which, during manufacturing, commercial, mining or silvicultural activities, comes into direct contact with, or results from the production, use or handling of any process, raw material or intermediate or final product, byproduct or wasteproduct. This includes but is not limited to contact cooling and heating wastewater, cutting and grinding wastewater, non-destruct testing rinsewater, printing and photographic processing wastewater, tumbling or cleaning of parts wastewater, water treatment wastewater, commercial laundry wastewater, food processing wastewater, reverse osmosis reject water, building maintenance wastewater and other process wastewater. Other

wastewaters which comingle with process wastewaters shall be deemed to be process wastewater. Process wastewater does not include air compressor condensate, non-contact cooling water, domestic sewage, blowdown from heating and cooling equipment, hydrostatic pressure testing wastewaters, stormwater, or wastewater from agricultural activities.

## **Authorizing Statutes**

Section 22a-430b of the General Statutes.

## **Who can use this general permit?**

Any SIU who initiates, originates, creates, or maintains a discharge of metal finishing, process, or non-process wastewater to a POTW either by a properly licensed transporter in accordance with Section 5(e)(4) of this general permit or via the sanitary sewer and,

- (1) in accordance with Section 4 of this general permit, submits a completed registration and fee and
- (2) in accordance with Section 3(b)(1) of this general permit, receives an Approval of Registration from the DEEP; and
- (3) such activity is consistent with all applicable goals and policies in section 22a-92 of the General Statutes, and will not cause adverse impacts to coastal resources as defined in section 22a-93 of the General Statutes; and
- (4) such activity does not threaten the continued existence of any species listed pursuant to section 26-306 of the General Statutes as endangered or threatened and will not result in the destruction or adverse modification of habitat designated as essential to such species; and
- (5) the registrant has certified in writing to the commissioner that a completed copy of the registration has been submitted to the applicable POTW Authority and the registrant has received an approval for connection to the respective POTW from such authority.

Consistent with 40 CFR 403.8(f)(2), a general permit may not be utilized for any metal finishing discharge whose limits are based on a Combined Wastestream Formula. Utilization of a Combined Wastestream Formula is necessary when a federal categorical discharge is mixed with discharges other than those covered by the respective category prior to an appropriate compliance monitoring location. Therefore, facilities with boiler blowdown, non-contact cooling water, water treatment wastewater and other non-metal finishing wastewaters that combine with metal finishing wastewaters prior to an appropriate compliance monitoring location shall not be authorized by this general permit.

## **Registration, Fee, and Professional Certification**

**Registration**—For all registrants, the General Permit Registration Form for the Discharge of Wastewaters from Significant Industrial Users (DEEP-WPED-REG-029) shall be submitted for review and approval.

**Fee**--A registration fee of \$6,250 and \$3,125, established in accordance with section 22a-6f of the General Statutes, shall be submitted for metal finishing discharges greater than or equal to 10,000 gallons per day and less than 10,000 gallons per day, respectively. A registration fee of \$1,000 shall be submitted for other eligible wastewater discharges.

Fees associated with this general permit shall be paid by certified check or money order payable to the Department of Energy and Environmental Protection.

**Professional Certification**--For metal finishing wastewaters, a Qualified Professional Engineer, and for process and non-process wastewaters, a Qualified Professional Engineer or a Qualified Certified Hazardous Materials Manager, as defined in the general permit, shall:

- Review general permit requirements relating to the subject facility;
- Make an affirmative determination that the Operation and Maintenance Plan, the Spill Prevention and Control Plan and the Solvent Management Plan, if applicable, are adequate to assure that the activity authorized under this general permit will comply with the terms and conditions of such general permit, as well as, all wastewater collection and treatment systems and monitoring equipment have been installed to control pollution to the maximum extent achievable using measures that are technologically available and economically practicable; will function properly as designed based on visual inspection, compliance and operating records and implementation of the Operation and Maintenance Plan; and are adequate to ensure compliance with the terms and conditions of this general permit;
- Provide a certification regarding such affirmative determination.

### **Conditions**

Consistent with 40 CFR 403.5(b), the following conditions apply to all metal finishing, process and non-process wastewater discharges.

Wastewater discharged under the authority of this general permit shall not:

- (1) cause or threaten interference or adverse effect upon the operation of the POTW;
- (2) cause or threaten interference or adverse effect upon the POTW's sludge handling, use or disposal, including but not limited to noncompliance with any federal, state, local laws, regulations or ordinances;
- (3) cause or threaten the POTW to exceed its influent design loading parameters;
- (4) cause or threaten the POTW to violate its permit, including but not limited to exceeding its permit limits;
- (5) cause or threaten a worsening of any condition which is causing the POTW to exceed its influent design loading parameters or violate its permit; or
- (6) cause or threaten pass through of any substance into the receiving waters which then causes or threatens pollution
- (7) contain pollutants which causes or threatens a fire or explosion hazard in the receiving POTW;
- (8) cause or threaten corrosive structural damage to the sanitary sewer or receiving POTW and shall not have a pH of less than 5.0 or more than 12.0 Standard Units;
- (9) contain solid or viscous pollutants in amounts which will cause obstruction of flow in the sanitary sewer system or receiving POTW;
- (10) contain heat in amounts which will inhibit biological activity in the receiving POTW;
- (11) contain pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health or safety problems; and
- (12) contain either singly or in combination with other discharges any pollutant in sufficient amounts to cause acute worker health and safety problems, problems in the collection system or pass through or interference with the receiving POTW;
- (13) cause or contribute to foaming at the receiving POTW or within its effluent; and
- (14) contain either singly or in combination with other discharges flow in excess of the hydraulic capacity of the receiving POTW's conveyance system.

## Metal Finishing Wastewater Effluent Limits

To ensure protection of the receiving POTW and the waters of the state from pollution, effluent limits apply to all metal finishing wastewater discharged under the authority of this general permit.

Metal finishing discharge limits contained in 40 CFR 413, 40 CFR 433 and section 22a-430-4(s) of the Regulations of Connecticut State Agencies were compared and the following limits were found to be consistent with the most stringent of the three regulatory requirements and thus incorporated into this general permit:

<b>Table 5A-1 : Metal Finishing Wastewater Pollutant Limits</b>				
Pollutant	Unit	Average Monthly Concentration	Maximum Daily Concentration	Maximum Instantaneous Concentration
Barium, Total	mg/l	2.0	4.0	6.0
Cadmium, Total	mg/l	0.07	0.11	0.16
Chromium, Hexavalent <sup>2</sup>	mg/l	0.1	0.2	0.3
Chromium, Total	mg/l	1.0	2.0	3.0
Copper, Total	mg/l	1.0	2.0	3.0
Cyanide, Amenable <sup>2</sup>	mg/l	0.1	0.2	0.3
Cyanide, Total	mg/l	0.65	1.2	1.8
Fluoride	mg/l	20	30	45
Gold, Total	mg/l	0.1	0.5	0.75
Lead, Total	mg/l	0.1	0.5	0.75
Mercury, Total	ug/l	ND<0.2	ND<0.2	ND<0.2
Nickel, Total	mg/l	1.0	2.0	3.0
Oil & Grease, HC Fraction <sup>3</sup>	mg/l		100	150
Organics, Total Toxic <sup>1,4</sup>	mg/l			2.13
Silver, Total	mg/l	0.1	0.43	0.64
Tin, Total	mg/l	2.0	4.0	6.0
Zinc, Total	mg/l	1.0	2.0	3.0

Footnotes:  
 1 As defined by Sections 40 CFR 413 and 433.  
 2 The limits for hexavalent chromium and amenable cyanide apply at the chromium reduction and cyanide destruction systems, respectively. Monitoring for these pollutants must be by grab sample average taken prior to combination with any dissimilar discharges.  
 3 This pollutant shall be monitored using a grab sample average taken prior to combination with any dissimilar discharges.  
 4 This pollutant shall be monitored using a grab sample taken prior to combination with any dissimilar discharges.

## Process and Non-process Wastewater Effluent Limits

- (1) **Effluent Limits**—Process and Non-process Wastewater not subject to Categorical Pretreatment Standards discharged under the authority of this general permit shall not contain any pollutant identified in Table 5B-1 of this section except in a concentration at or below the maximum concentration specified therein.

**Table 5B-1 Effluent Limits<sup>1</sup>**

Pollutant	Maximum Instantaneous Concentration	Pollutant	Maximum Instantaneous Concentration
<b>Conventional Pollutants</b>		<b>Metals</b>	
	mg/l		mg/l
Biochemical Oxygen Demand (BOD5)	600.0 <sup>2</sup>	Lead, Total	0.5
Total Suspended Solids (TSS)	600.0 <sup>2</sup>	Nickel, Total	2.0
Ammonia-Nitrogen	50.0 <sup>3</sup>	Silver, Total	0.5 <sup>5</sup>
Nitrate-Nitrogen	50.0 <sup>3</sup>	Tin, Total	4.0
Total Fats, Oils and Grease <sup>4</sup>	100.0	Zinc, Total	2.0
<b>Organic Pollutants</b>			
	mg/l		
Total Volatile Organics	5.0	Antimony, Total	4.0
Formaldehyde	10.0 <sup>3</sup>	Arsenic	0.10
Methylene Chloride	1.0	Beryllium, Total	2.0
Phenols, Total	10.0	Cobalt, Total	4.0
Phthalate Esters	2.0	Mercury, Total	0.0002
Polynuclear Aromatic Hydrocarbons	0.5	Molybdenum, Total	4.0
Ethylene Glycol	300.0 <sup>3</sup>	Selenium, Total	0.5
Propylene Glycol	300.0 <sup>3</sup>	Strontium, Total	2.0
<b>Metals</b>			
	mg/l		
Cadmium, Total	0.5	Thallium, Total	2.0
Chromium, Total	2.0	Titanium, Total	4.0
Copper, Total	2.0	Vanadium, Total	2.0
		Zirconium, Total	2.0

<sup>1</sup>These effluent limits do not apply to residuals generated by water treatment facilities that are transported to the solids handling portion of a POTW.

<sup>2</sup>This pollutant concentration may be exceeded provided that the total mass loading (flow x concentration) of such pollutant discharged to the receiving POTW does not exceed 100.0 lbs/day or 2% of the POTW's design loading, whichever is less. This limit does not apply to discharges of Food Processing Wastewater or Water Treatment Wastewater

<sup>3</sup>For ammonia-nitrogen, nitrate-nitrogen, formaldehyde, ethylene glycol, or propylene glycol, the pollutant concentration may be exceeded provided that the total mass loading (flow x concentration) of each pollutant discharged to the receiving POTW does not exceed 10.0 lbs/day.

<sup>4</sup>For Food Processing wastewaters only, use EPA Method 1664, Rev. A reporting as Total Oil & Grease. For all other wastewaters use EPA Method 1664, Rev. A reporting as Total Petroleum Hydrocarbons.

<sup>5</sup>For photographic processing wastewaters only, if maximum daily flow is less than 100 gallons per day, the silver effluent limit is 5.0 mg/l. For flows greater than 100 gpd, the silver limit is 2.0 mg/l.

## Other Conditions

Mercury is a potent neurotoxin that poses risks to human health. Exposure to this toxic metal occurs through the consumption of fish that contain mercury's most toxic form, methyl-mercury. Consistent with the "Northeast Regional Mercury Total Maximum Daily Load" issued October 2007, this general permit establishes limits for mercury at its minimum level of 0.2 ug/l.

The loading of nutrients, principally phosphorous and nitrogen, into the waters of the state must be maintained below a threshold level to ensure any surface water body shall not exceed that which supports maintenance or attainment of the designated uses for such water body. Metal finishing wastewater discharges are capable of maintaining a reasonable potential to contribute significant quantities of phosphorous and nitrogen into receiving POTWs. Therefore, monitoring of these chemical pollutants is a requirement of this general permit.

The loading of oil and grease, hydrocarbon fraction must be maintained below a threshold level to ensure protection of receiving POTWs and subsequent surface waters. Metal finishing wastewater discharges are capable of maintaining a reasonable potential to contribute significant quantities of oil and grease, hydrocarbon fraction into receiving POTWs. A maximum daily limit of 100 mg/l has been established for this pollutant.

DEEP assessed potential pollutant pass-through by comparing historical POTW effluent results to theoretical water quality-based limits (TWQBLs). Those POTWs with effluent results that were currently and/or chronically above TWQBLs for any pollutant associated with this general permit were prescribed specific effluent limits that are consistent with section 22a-430-4(m) of the Regulations of Connecticut State Agencies. These limits are more stringent than those listed in Table I and are included within Appendix F1 of the general permit.

**Effluent Monitoring** Consistent with current individual permit application requirements associated with metal finishing discharges, representative sampling of the effluent for analyses of : General pollutants, Toxic Metals, Cyanides, Phenols, Pesticides, as well as Volatile, Acid and Base/Neutral Organic compounds shall be performed and submitted as part of an appropriate registration.

Process and non-process wastewaters will be monitored for general pollutants commonly associated with categories listed in the permit.

Unless a monitoring waiver is provided by the Department for specific pollutant(s) in accordance with 40 CFR 403.12(e)(2), periodic monitoring for all pollutants is required throughout the term of the general permit.

## Monitoring Frequency

**Metal Finishing**--Each metal finishing discharge covered by this general permit shall be monitored at a frequency consistent with the minimum frequency of monitoring for metal finishing facilities listed in section 22a-430-3 of the Regulations of Connecticut State Agencies. The frequencies are based on maximum daily flows and are as follows:

Max. Daily Flow	< 5,000 gpd	5,000 – 10,000 gpd	>10,000 gpd
Min. Monitoring Freq.	Monthly	Twice per Month	Weekly

**Process and Non-process Wastewater**—Categories of Group I: Process Wastewater Discharges and Group II: Non-process Wastewater Discharges are shown below followed by a table of monitoring frequencies.

### **Group I: Process Wastewater Discharges**

- Contact cooling & heating water
- Cutting and grinding wastewater
- Non-destruct testing rinsewater
- Printing and photo processing wastewater
- Tumbling and cleaning wastewater
- Water treatment wastewater
- Commercial laundry wastewater
- Food processing wastewater
- Reverse osmosis reject water
- **Other process wastewaters**, as defined in this general permit, also including: (i) process wastewaters which are hauled by a Connecticut licensed transporter to a POTW that has been approved by the commissioner to accept over-the-road wastewater (a list of POTWs that have been approved by the commissioner to accept over-the-road wastewater is described in Appendix G of this general permit); (ii) process wastewaters requiring a variance; and (iii) other wastewaters determined by the commissioner to be process wastewaters.

### **Group II: Non-process Wastewater Discharges**

- Air compressor condensate & blowdown
- Boiler blowdown
- Building maintenance wastewater
- Fire suppression testing wastewater
- Hydrostatic pressure testing wastewater
- Non-contact cooling water
- Potable water system maintenance or sampling wastewaters
- Swimming pool wastewaters
- Vehicle maintenance wastewaters
- **Other non-process wastewaters** also including: (i) non-process wastewaters which are hauled by a Connecticut licensed transporter to a POTW that has been approved by the commissioner to accept over-the-road wastewaters (a list of POTWs that have been approved by the commissioner

to accept over-the-road wastewater is described in Appendix G of this general permit); (ii) non-process wastewaters requiring a variance; and (iii) other wastewaters determined by the commissioner to be non-process wastewaters.

**Table 5B-3 Monitoring and Reporting Frequencies for Process and Non-process Wastewater Discharges**

<b>Discharge Group</b>	<b>Total Maximum Daily Flow Thresholds per Category of Wastewater</b>	<b>Minimum Frequency of Pollutant Monitoring<sup>1,3</sup></b>	<b>Electronic Reporting Required<sup>2</sup></b>
Group I Process Wastewaters (except as noted below)	Flow < 1,000 gpd	None	No
	1,000 gpd ≤ Flow < 10,000 gpd	Quarterly	Yes
	10,000 gpd ≤ Flow	Monthly	Yes
Group I -- Food Processing, Commercial Laundry, Reverse Osmosis Reject Water	Flow < 25,000 gpd	None	No
	Flow ≥ 25,000 gpd	Quarterly	Yes
Group II – Air Compressor Condensate, Boiler Blowdown, Non-contact Cooling Water, Hydrostatic Pressure Testing Wastewater	Flow < 10,000 gpd	None	No
	Flow ≥ 10,000 gpd	Quarterly	No
Group II -- Building Maintenance, Fire Suppression Testing, Swimming Pool, Vehicle Maintenance, Potable Water System Maintenance, etc. <sup>4</sup>	All Flows	None	No

<sup>1</sup>Discharges that do not have a prescribed monitoring frequency must comply with the effluent limits of Section 5B(a) of this general permit. The permittee should maintain records of monitoring data that the permittee believes is representative of the current discharge.

<sup>2</sup>Note: Report to DEEP electronically via NetDMR.

<sup>3</sup>For water treatment wastewaters associated with annual or semi-annual maintenance cleaning of clarifier tank, settling lagoon, or other large tanks which may discharge greater than 50,000 gallons per day, samples shall be taken from the first 10% and last 10% of the discharge and analyzed separately. Such discharges shall not be counted toward the total maximum daily flow when determining monitoring frequency. For all other water treatment wastewater discharges greater than 10,000 gpd, if the discharge lasts longer than four hours, two grab samples shall be taken at least four hours apart and composited.

<sup>4</sup>See Section 5B(b)(2).

## Treatment

Treatment shall be required for any pollutant capable of exceeding the limits listed in this general permit.



## **Reporting**

All metal finishing and some process wastewater monitoring results will be reported electronically via NetDMR, EPA's electronic reporting system.

## **Permit Duration**

This general permit shall expire October 30, 2025.

## **Modified Registrations**

A permittee shall submit a modified registration:

- (A) To correct inaccurate or misleading information previously submitted to the Department, in accordance with Section 6(g) of this general permit;
- (B) Prior to any significant facility modifications, as described in Section 5(e)(3)(A) of this general permit.

## **Transfer**

This general permit may be transferred in accordance with section 22a-60 of the General Statutes and section 22a-430-4(o) of the Regulations of Connecticut State Agencies.

## **Contact Address**

WATER PERMITTING AND ENFORCEMENT DIVISION  
BUREAU OF MATERIALS MANAGEMENT AND COMPLIANCE ASSURANCE  
DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION  
79 ELM STREET  
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This overview is designed to answer general questions and provide basic information. You should refer to the appropriate statutes and regulations for the specific regulatory language of the different permit programs. This document should not be relied upon to determine whether or not an environmental permit is required. It is *your* responsibility to ensure that all required permits have been obtained.