

# General Permit for Discharges from Miscellaneous Industrial Users (MIU GP)

## Instructions for ATTACHMENT C to Notification Form

### Discharge Screening Analysis

For existing discharges of **Group I Process** and **Group II Other non-process wastewater only**, one screening analysis from the testing of a sample taken within 90 days of notification for pollutants specified by Section 5(b)(1) of the MIU GP, shall be submitted with the notification form.

**An Industrial User discharging wastewater under the authority of the MIU GP must first follow the local ordinances and regulations of the applicable POTW Authority. If a pollutant limit has not been established by the applicable POTW Authority(s), the limit for such pollutant identified in Table 5-1 of the MIU GP shall apply.**

Facility Name: *(from page 1 of Notification Form)*

Address: *(from page 1 of Notification Form)*

Screening results shall be recorded on this form as required pursuant to Section 4(c)(3)(C) of the MIU GP and attached to the Notification Form being submitted to each applicable POTW Authority.

*(Section 4(c)(3)(C) of the MIU GP requires one screening analysis for existing discharges of all Group I process wastewaters and Group II Other non-process wastewaters using a DPH approved Environmental Testing Laboratory.*

*The list of labs can be found on the DPH website at: <https://portal.ct.gov/DPH>. Once at the homepage, use the following links: Topics A-Z → Environmental Health → Environmental Laboratories → In-State-Approved-Commercial-Environmental-Laboratories.)*

*Instructions for collecting a sample for discharge analysis can be found on page 4 of these instructions.*

See Table 5-2 of the MIU GP (provided on page 3 of this form) for discharge analysis requirements per category of Miscellaneous wastewater. In addition, each permittee must monitor: 1) for any parameters specified in Section 5(a)(1) of the MIU GP that are known or suspected present in the discharge and 2) as directed by the POTW. Parameters not required shall be marked "NA". Copies of analytical laboratory results must be attached.

Date Sampled: <i>(The testing lab will list this date on the results.)</i>		Discharge ID Number: <i>(This helps identify the discharge.)</i>	
Parameter	Result (specify unit of measurement) <i>(e.g. gpd for flow, s.u. for pH, mg/l or ug/l for concentration)</i>	POTW Authority Limit (specify below) <i>(check with town WPCA for limits)</i>	MIU GP Permit Limits specified in Section 5(a) <i>(from Table 5-1 of the MIU GP)</i>
Flow, day of sample		As approved by POTW Authority	25,000 gpd Process Wastewater
pH			Between 5.0 and 12.0
Biochemical Oxygen Demand (BOD5)			600.0 mg/l or 100.0 lbs/day or 2% of the POTW design load
Chemical Oxygen Demand (COD)			1200.0 mg/l
Total Suspended Solids			600.0 mg/l or 100.0 lbs/day or 2% of the POTW design load
Total Kjeldahl Nitrogen (TKN)			40.0 mg/l or 8.0 pounds per day
Nitrate-nitrite (as N)			40.0 mg/l or 8.0 pounds per day
Total Phosphorus <sup>1</sup>			---
Oil & grease, Total Petroleum Hydrocarbons			100.0 mg/l
Oil & grease, total (Food Processing only)			100.0 mg/l
Volatile Organic Compounds, total			5.0 mg/l

Date Sampled: <i>(The testing lab will list this date on the results.)</i>		Discharge ID Number: <i>(This helps identify the discharge.)</i>	
Parameter	Result (specify unit of measurement) <i>(e.g. gpd for flow, s.u. for pH, mg/l or ug/l for concentration)</i>	POTW Authority Limit (specify below) <i>(check with town WPCA for limits)</i>	MIU GP Permit Limits specified in Section 5(a) <i>(from Table 5-1 of the MIU GP)</i>
Formaldehyde			10.0 mg/l or 10 pounds per day
Methylene Chloride			1.0 mg/l
Phenols, total			10.0 mg/l
Phthalate esters			2.0 mg/l
Polynuclear Aromatic Hydrocarbons			0.5 mg/l
Ethylene Glycol			300.0 mg/l or 10 pounds per day
Propylene Glycol			300.0 mg/l or 10 pounds per day
Cadmium, total			0.5 mg/l
Chromium, total			2.0 mg/l
Copper, total			2.0 mg/l
Lead, total			0.5 mg/l
Nickel, total			2.0 mg/l
Silver, Total			0.5 mg/l (for photo processing-- see Table 5-1 of MIU general permit)
Tin, Total			4.0 mg/l
Zinc, total			2.0 mg/l
Antimony, total			4.0 mg/l
Aluminum, total <sup>2</sup>			---
Arsenic, total <sup>2</sup>			0.10 mg/l
Beryllium			2.0 mg/l
Cobalt, Total			4.0 mg/l
Molybdenum, Total			4.0 mg/l
Selenium, Total			0.5 mg/l
Strontium, Total			2.0 mg/l
Thallium, Total			2.0 mg/l
Titanium, Total			4.0 mg/l
Vanadium, Total			2.0 mg/l
Zirconium, Total			2.0 mg/l
Temperature (Non-contact cooling water only)			Refer to MIU general permit

<sup>1</sup> Phosphorus monitoring shall be required only for discharges being received by a POTW listed in Appendix D2 of the Miscellaneous GP (excluding commercial laundries which must always monitor for phosphorus).

<sup>2</sup>Aluminum and arsenic monitoring shall be required only for water treatment wastewater associated with alum treatment.

"I certify that I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute. I also certify that this form is complete and accurate as prescribed by the commissioner without alteration of the text."

\_\_\_\_\_  
Signature of Person Completing Form

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name of Person Completing Form (print or type)

\_\_\_\_\_  
Title (if applicable)

**Table 5-2 from MIU GP.** Screen discharges according to this table, any parameter requested by the local POTW Authority, and any parameter specified in Section 5(a)(1) of the MIU GP that may be known or suspected present in the discharge.  
*(The categories below are the same Group I Process wastewater categories found on the Notification Form.)*

Discharge Category	Contact Cooling & Heating Water	Cutting & Grinding	Non-Destruct Testing Rinsewater	Printing (Photo-Processing <sup>1</sup> )	Tumbling or Cleaning	Water Treatment	Commercial Laundry	Food Processing	Reverse Osmosis Reject Water	Other process & nonprocess wastewater
Temperature	X						X	X	X	X
pH	X	X	X	X	X	X	X	X	X	X
BOD <sub>5</sub>			X	X	X		X	X		X
COD			X	X			X	X		X
Total Suspended Solids	X	X	X		X	X	X	X		X
Total Kjeldahl Nitrogen				X			X	X		X
Nitrate-nitrite (as N)				X	X		X	X		X
Phosphorus <sup>(3)</sup> , total	X	X	X	X	X	X	X	X	X	X
Oil & grease, TPH	X	X	X		X		X			X
Oil & grease, total								X		
Volatile Organic Compounds, total				X						
Aluminum						X <sup>2</sup>				
Arsenic						X <sup>2</sup>				
Cadmium, total				X						
Chromium, total		X			X					
Copper, total	X	X	X	X	X	X				X
Lead, total	X	X	X	X	X	X				X
Nickel, total		X		X	X					
Silver, total				X						
Zinc, total	X	X	X		X	X	X			X

<sup>1</sup> Required monitoring for a photoprocessing discharge is silver and pH only. Refer to specific instructions at Section 5(b)(5)(B) of the Miscellaneous GP.

<sup>2</sup> Aluminum and arsenic monitoring shall be required only for water treatment wastewater associated with alum treatment.

<sup>3</sup> Phosphorus monitoring shall be required only for discharges being received by a POTW listed in Appendix D2 of the Miscellaneous GP (excluding commercial laundries which must always monitor for phosphorus).

# Instructions on How to Take a Wastewater Sample for a Discharge Analysis

## Introduction

Many of the DPH Approved Environmental Testing Laboratories at the link found on page 1 of these instructions will offer services to properly sample the wastewater necessary for the discharge analysis required for the MIU GP notification form. However, an Industrial User can choose to collect the wastewater sample on their own.

The Industrial User must first choose the environmental testing lab they will use to analyze the wastewater sample. The lab chosen will then provide properly prepared sample collection containers and some basic instructions on how to collect the sample. In the absence of those instructions, the Industrial User may use the following summary of instructions as a basic guide. This summary in no way replaces a complete set of instructions which can be found in a document entitled **Wastewater Sampling, Document # SESDPROC-306-R4 from the EPA Region 4 Science and Ecosystem Support Division.**

### 1.1 Safety

Proper safety precautions must be observed when collecting wastewater samples. Wastewater can contain microbiological disease agents (pathogens), chemical poisons (toxins), and other biological, chemical, and physical components that may cause human health problems or disturb natural aquatic ecosystems. Waterborne pathogens in the sewer collection system are different, and potentially more antibiotic resistant, than decades ago. Wastewater workers can be exposed to wastewater pathogens and toxins through several pathways:

- respiratory exposure -face shield and masks protect from droplets and aerosols
- dermal exposure -gloves and hand hygiene protect from direct contact
- surface (fomite) exposure - barriers between skin and surfaces protect from wastewater and plant equipment contact

Refer to Centers for Disease Control and Prevention (CDC) Guidance for Controlling Potential Risks to Workers exposed to Class B Biosolids. DHHS (NIOSH) Publication Number 2002-149. Refer to the SESD Safety, Health and Environmental Management Program Procedures and Policy Manual and any pertinent site-specific Health and Safety Plans (HASP) for guidelines on safety precautions. These guidelines, however, should only be used to complement the judgment of an experienced professional. Address chemicals that pose specific toxicity or safety concerns and follow any other relevant requirements, as appropriate.

### 1.2 Procedural Precautions

The following precautions should be considered when collecting wastewater samples.

- Special care must be taken not to contaminate samples. This includes storing samples in a secure location to preclude conditions which could alter the properties of the sample. Samples shall be custody sealed during long-term storage or shipment.

### 2.1 Special Precautions for Wastewater Sampling

- A clean pair of new, non-powdered, disposable gloves will be worn each time a different location is sampled and the gloves should be donned immediately prior to sampling. The gloves should not come in contact with the media being sampled and should be changed any time during sample collection when their cleanliness is compromised.
- Sample containers for samples suspected of containing high concentrations of contaminants shall be stored separately.

- Sample collection activities shall proceed progressively from the least suspected contaminated area to the most suspected contaminated area. Samples of waste or highly contaminated media must not be placed in the same ice chest as environmental (i.e., containing low contaminant levels) or background/control samples.

## ***2.2 Sample Handling and Preservation Requirements***

- Wastewater samples will typically be collected either by directly filling the sample container or by using an automatic sampler or other device.
- During sample collection, if transferring the sample from a collection device, make sure that the device does not come in contact with the sample containers.
- Place the sample into appropriate, labeled containers. Samples collected for VOC analysis must not have any headspace (see Section 7.4, Volatile Organic Compounds). All other sample containers must be filled with an allowance for ullage.
- All samples requiring preservation must be preserved as soon as practically possible, ideally immediately at the time of sample collection.
- Readings for pH and temperature, if required, must be taken in the field at the time of sampling.

## ***3.1 Sampling Techniques and Equipment***

The wastewater sampling techniques and equipment described in this summary and its parent document are designed to minimize effects on the chemical and physical integrity of the sample. The variety of conditions at different sampling locations requires that considerable judgment be exercised regarding the methodologies and procedures for the collection of representative samples of wastewater. Each sampling location warrants attention commensurate with its complexity.

A basic rule generally applicable to sample collection is that the sample should be collected where the wastewater is well mixed. When collecting a sample from a port on a discharge pipe, the collector should ensure that wastewater has been flowing through the pipe for a few minutes before collecting the sample.

When collecting a sample from a large vessel containing a batch discharge, the collector should ensure that the batch has been recently mixed. The collector should then employ a boom or extender that can hold the collection vessel so a sample can be taken at approximately 40 to 60 percent of the water depth, where the turbulence is at a maximum and the possibility of solids settling is minimized. Skimming the water surface or dragging the channel bottom should be avoided.

## ***3.2 Site Selection for Wastewater Sampling***

Wastewater samples must be collected at a location where the sample collected is representative of the wastewater being discharged. If the Industrial User is required to complete ***Attachment A, Detailed Discharge Information*** as part of its notification, the sample must be collected at the same location specified at Part II.3 Monitoring Location of this attachment.

Section 5(b)(6) Monitoring Location of the MIU GP states:

“All wastewater samples, except for photographic processing wastewater, shall be collected before combination with non-contact cooling water, hydrostatic pressure testing wastewater, or the facility’s domestic sewage. For any discharge of photographic processing wastewater, samples shall be taken before combination with any other wastewater discharges.”

For situations where it is not possible to collect a sample “before combination with non-contact cooling water, hydrostatic pressure testing wastewater, or the facility’s domestic sewage”, the sample should be collected at the lateral pipe where the wastewater leaves the facility before entering the sanitary sewer system.

#### ***4. Grab Samples***

The type of sample collected for the discharge analysis will be a grab sample. The grab sample should be representative of the wastewater conditions at the time of sample collection. The sample volume depends on the type and number of analyses to be performed and should be specified by the testing lab.

#### ***5. Manual Sampling***

Manual sampling is normally used for collecting grab samples and/or for immediate insitu field analyses. The best method to manually collect a sample is to use the actual sample container which will be used to transport the sample to the laboratory. This eliminates the possibility of contaminating the sample with intermediate collection containers. If the water or wastewater stream cannot be physically reached by the sampling personnel or it is not safe to reach for the sample, an intermediate collection container may be used, from which the sample can be redistributed to other containers. If this is done, however, the container used to collect the sample must be properly cleaned and must be made of a material that meets the requirements of the parameter(s) being investigated. (Consult the lab in this situation.)

Samples for oil and grease, bacteria, and most volatile compounds (both organic and inorganic) must always be collected directly into the sample container. In some cases it may be best to use a pump, either power or hand operated, to withdraw a sample from the water or wastewater stream. If a pump is used, it is imperative that all components of the pump that come in contact with the sample are properly cleaned to ensure the integrity of the sample.

In general, samples are manually collected by first selecting a location in the wastestream that is well mixed then dipping the container in the water or wastewater stream so the mouth of the container faces upstream. The container should not be overfilled if preservatives are present in the container.

Readings for pH and temperature, if required, must be taken in the field at the time of sampling.

#### ***6. Documentation***

The collection container should be properly labeled with a description of its contents as well as the time and date of its collection. A record should also be kept of the collector’s name. The sample should be properly sealed and placed in an ice-cooled cooler and delivered back to the environmental testing laboratory immediately for analysis.