CITY OF HELENA
INDUSTRIAL PRETREATMENT PROGRAM
SAMPLING AND ANALYSIS PLAN

This document establishes sampling and reporting requirements for industrial users within the purview of the City of Helena Industrial Pretreatment Program (Control Authority). Industrial user self-monitoring and reporting enables the Control Authority to keep informed of characteristics of the user's discharge and compliance status so that any necessary permit modifications or enforcement actions can be initiated. Periodic self-monitoring also serves as a reminder to the industrial user that compliance with the effluent limits is its responsibility.

The industrial user permit's monitoring and reporting section contains specific requirements for each of the following items:

- Sampling location
- Pollutants to be monitored, including pollutants with a sampling waiver
- Sample collection method
- Monitoring frequencies
- Analytical methods
- Reporting and certification requirements

The Control Authority considers several factors in determining the specific requirements to be imposed. Basic factors that affect sampling location, sampling method, sampling frequency, and reporting frequency are as follows:

- Applicability of categorical Pretreatment Standards
- Effluent and process variability
- Flow or pollutant loading or both
- Type of pollutant

Significant industrial users (SIUs) include:

- Categorical industrial users (CIUs) - industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N (see Table 1 for examples)
- Any other industrial user that discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater)
- Any industrial user that contributes a process wastestream that makes up 5 percent or more of the

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average dry-weather hydraulic or organic (BOD, TSS, and such) capacity of the POTW treatment plant

- Any industrial user that is designated as such by the Control Authority because 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)) [40 CFR 403.3(v)].

Several categorical pretreatment standards contain special monitoring requirements for specific regulated pollutants. Table 1 contains some examples of these special monitoring requirements.

TABLE 1
EXAMPLES OF SPECIAL MONITORING AND REPORTING REQUIREMENTS FOR SPECIFIC CATEGORICAL PRETREATMENT STANDARDS

Electroplating [40 CFR Part 413]

- In lieu of routine monitoring for TTO, facilities may certify that toxic organics are not used in the facility or are controlled through a Toxic Organics Management Plan (TOMP). The TOMP and certification statements must be submitted to the Control Authority.
- If monitoring for TTO pollutant is necessary to measure compliance, the facility is required to analyze only for those pollutants expected to be present.
  - The owner or operator certifies in writing that no cyanide is used.

Pharmaceutical Manufacturing [40 CFR Part 439]

- Unless otherwise noted, self-monitoring must be conducted at the final effluent discharge point.
- If monitoring for cyanide at end-of-pipe is impractical because of dilution, compliance with the cyanide standard established in subparts A and C must be demonstrated at in-plant monitoring points pursuant to 40 CFR 403.6(e)(2) and (4).
- The Control Authority may impose monitoring requirements on internal wastestreams for any other parameter regulated by subparts A and C.
- In lieu of conducting compliance monitoring for the pollutants regulated in all subparts, the Industrial User can certify that the regulated pollutants are neither used nor generated.

Pulp, Paper, Paperboard [40 CFR Part 430]

- Specific monitoring frequencies for chlorinated organic pollutants for subparts B and E are listed at 40 CFR 430.02(a). The duration of this required monitoring is listed at 40 CFR 430.02(b).
- Reduced monitoring frequencies for bleach plant pollutants are allowed under the Voluntary Advanced Technology Incentives Program as specified at 40 CFR 430.02(c) and (d).

Transportation Equipment Cleaning [40 CFR Part 442]

- The facilities may in lieu of achieving the Pretreatment Standards established in subparts A and B develop and implement a Pollutant Management Plan and submit a certification statement indicating intent to do so.

Electrical and Electronic Components [40 CFR Part 469]

- In lieu of routine monitoring for TTOs, facilities may certify that toxic organics are not used in the facility or are controlled through a solvent management plan. The solvent management plan and certification statements must be submitted to the Control.

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TABLE 1 (continued)

Coil Coating [40 CFR Part 465]

- The facilities may be exempted from cyanide monitoring if:
  - The first cyanide sample collected during the calendar year is less than 0.07 mg/L of cyanide; and,
  - The owner or operator certifies in writing that no cyanide is used.
- As an alternative to monitoring for TTOs in subpart D, the facilities may meet the alternative oil and grease standard and must monitor for oil and grease using the analytical method outlined in 40 CFR 465.03(c).

Leather Tanning [40 CFR Part 425]

- The analytical method specified for sulfide in 40 CFR 425.03 must be used for determination of sulfide in alkaline wastewaters discharged by plants operating in all subcategories except subpart C.
- Facilities may be exempt from the sulfide standard if the Control Authority submits a written certification to EPA that the sulfide does not interfere with the treatment works.

Metal Finishing [40 CFR Part 433]

- Monitoring for compliance with the cyanide limit must be conducted after cyanide treatment and before dilution with other wastestreams. If monitoring the segregated cyanide wastestream cannot be done, then samples of the facility's final effluent may be taken, if the applicable cyanide limitations are adjusted based on the dilution ratio of the cyanide wastestream flow to the facility's effluent flow.
- In lieu of routine monitoring for TTO, facilities may certify that toxic organics are not used in the facility or are controlled through a TOMP. The TOMP and certification statements must be submitted to the Control Authority.
- If monitoring for TTO pollutant is necessary to measure compliance, the facility is required to analyze only for those pollutants expected to be present.

Porcelain Enameling [40 CFR Part 466]

- Facilities may be exempted from chromium monitoring if:
  - The first sample collected during the calendar year is less than 0.08 mg/L of chromium; and,
  - The owner or operator certifies in writing that chromium is not used.

1.1 SAMPLING LOCATIONS

Selecting the appropriate sampling point(s) is critical in determining compliance with effluent limits. In determining the appropriate sampling locations, the following rules should be applied:

- Sampling location(s) must coincide with the point(s) at which the effluent limits apply
- Sampling location(s) must produce a sample representative of the nature and volume of the Industrial User's effluent
- Sampling locations must be safe, convenient, and accessible to Industrial User and Control Authority personnel

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If there is no ready access to a representative sampling point, the Control Authority will require the permittee to provide such access including, if necessary, installation of sampling manholes. The sampling location(s) chosen should also allow the measurement or estimation of the volume of wastewater flow.

Because the Control Authority's local limits generally apply to the entire discharge from an Industrial User, a sewer manhole at the connection between the industrial facility's sewer pipe and the Control Authority's sewer pipe is usually selected as the sampling point. Such a sampling manhole allows easy access by the Control Authority and usually facilitates collecting a sample of the user's total discharge. However, in some cases, the manhole could contain wastewater discharges from upstream domestic or other Industrial Users connected to the Control Authority's sewer pipe, making it impossible to obtain a sample of any *one* Industrial User's discharge. In such a case the Control Authority will identify a more appropriate sampling location.

Another important factor that must be considered when establishing an appropriate sampling location at an industrial facility subject to categorical Pretreatment Standards is the collection of representative samples. Categorical Pretreatment Standards are numerical limits that apply to specific regulated wastestreams before the wastestreams are mixed with other flows. Because of that, the sampling point(s) chosen must provide representative samples of categorical wastestreams and should be after treatment of the categorical wastestreams if treatment is used. If other wastestreams are combined *before* treatment, and sampling of the effluent occurs after treatment, then alternate discharge limits must be established to account for the dilution effect of these wastestreams. However, if the other wastestreams are combined after treatment but before the facility's monitoring point, a different formula must be used. A flow proportioning formula or a more stringent calculation must be used to calculate alternate categorical Pretreatment Standards where other flows combine *after* treatment but before sampling.

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In addition, the Control Authority can require analytical, engineering and other data to determine the adjusted limits, or the Control Authority can require two sample points (sampling points before and after the mixing of additional wastestreams).

TABLE 2
EXAMPLES OF SAMPLING LOCATIONS IN PERMITS

EXAMPLE OF SPECIFYING SAMPLING LOCATION BY NARRATIVE DESCRIPTION

Pipe 01A is defined as the sampling site from the industry's process wastewater discharge downstream from the existing treatment clarifier. Note that after the upgraded treatment system becomes operational, the sampling site will be the first manhole downstream from the sand filters.

EXAMPLE OF MULTIPLE SAMPLING LOCATIONS SPECIFIED BY NUMBER DESIGNATION

IV. SELF-MONITORING REQUIREMENTS

A. Sample Locations

1. Discharge from the Chemistry-Fine Arts Building must be sampled at the Manhole No. 50
2. Discharge from the Duane Physics Building must be sampled at the Manhole No. 22
3. Discharge from the Research Lab No. 1 must be sampled at the Manhole A.

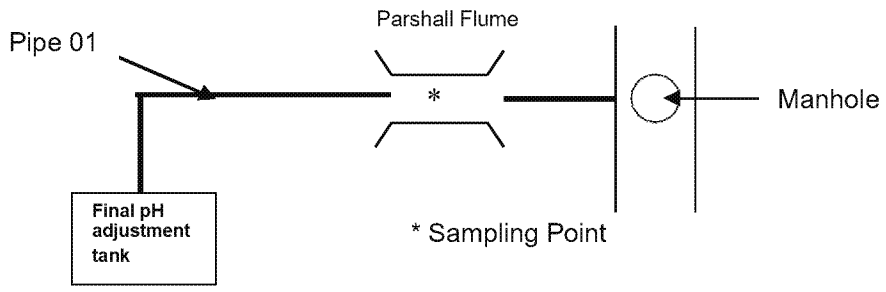
EXAMPLE OF SAMPLING LOCATION SPECIFIED BY DIAGRAM

Part I Permit No. 001

Part 1. Effluent Limitations and Monitoring Requirements

A. Description of Discharges

Pipe	***Description***
01	Discharge Pipe—Discharge of wastewater generated by all regulated metal-finishing processes at the facility. Samples must be collected at the point indicated on the attached diagram.



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The Control Authority will consider each of the above factors to identify the most practical and most representative sampling location(s). Once the sampling locations are selected, the Control Authority will specify the sampling locations in the permit.

1.1.1 Sampling Location for Current Industrial Users

Decorative Industrial Plating (DIP) Sampling Location: Currently, only rinse tank water is discharged to the Control Authority's wastewater collection system. The discharge from the rinse tank is a slow, constant flow to the Control Authority's wastewater collection system while DIP is operating. Operation is defined as periods when platting is occurring at the facility. The DIP sampling location is downstream of the rinse tank and upstream of the wastewater collection system discharge. If DIP notifies the Control Authority of changes to the discharge process, the Control Authority will evaluate the appropriateness of the current sampling location. The appropriateness of the sampling location will be evaluated prior to each Industrial User Permit renewal.

Montana Rail Link (MRL) Sampling Location: Currently, MRL collects rain and snow melt from track pans within the railyard. The collected runoff is piped to an underground water/oil separator where the oil is recovered. The water is pumped to a 12,500 gallon above-ground storage tank. When the tank is full, a sample of the wastewater is collected and analyzed. The MRL sampling location is the 12,500 gallon above-ground storage tank. If the analysis shows acceptable levels for pollutants, the wastewater is discharged to the Control Authority's wastewater collection system. If the pollutant levels exceed allowable discharge limits, the tank can be aerated and re-sampled. If MRL notifies the Control Authority of changes to the discharge process, the Control Authority will evaluate the appropriateness of the current sampling location. The appropriateness of the sampling location will be evaluated prior to each Industrial User Permit renewal.

2.1 POLLUTANTS TO BE MONITORED

Industrial User self-monitoring is required for all pollutants limited by specific numerical values in the Industrial User permit. Industrial Users subject to categorical Pretreatment Standards are required to monitor and report the analytical results for all regulated pollutants to comply with the reporting requirements of 40 CFR 403.12(e) of the General Pretreatment Regulations unless the Control Authority has authorized the discharger to forgo sampling of a pollutant that is neither present or expected to be present. Some categorical Pretreatment Standards allow alternatives to sampling specific regulated pollutants. In addition, the Control Authority will follow EPA's *Guidance Manual for Implementing Total Toxic Organics (TTO) Pretreatment Standards* contains guidance on the TTO monitoring

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alternatives.

The Control Authority may require the Industrial User to monitor for other pollutants of potential concern. In such a case, a monitoring-only requirement may be included as an additional condition of the permit. The Industrial User is also be required to monitor flow (even if flow is not limited). A flow-monitoring requirement is necessary where mass limits are imposed to determine compliance with mass limits. In addition, flow-monitoring is required when the Control Authority is converting concentration-based categorical Standards to an equivalent mass limit. Flow monitoring is also required to report daily maximum and average flows in semiannual reports.

2.1.1 Pollutants Monitored by Current Industrial Users

Decorative Industrial Plating (DIP) Pollutants: Currently, DIP self-monitors pH levels in the rinse tank daily when the facility is operating. Operation is defined as periods of time when platting is occurring at the facility. DIP also self-monitors cyanide and metals (arsenic, cadmium, chromium, chromium-III, chromium-VI, copper, lead, mercury, molybdenum, nickel, selenium, silver, and zinc). Since DIP is a categorical industrial user Total Toxic Organics (TTOs) must be addressed. TTOs are be sampled once per Industrial User Permit cycle, and each quarterly report must include a Toxic Organic Management Plan and TTO Certification Statement in lieu of frequent TTO monitoring.

Montana Rail Link (MRL) Pollutants: Currently, MRL self-monitors for benzene and BTEX due to the potential for stormwater to come in contact with diesel fuel and lubricating oil within the railyard.

3.1 SAMPLE TYPE

The permit specifies the sample collection method or type of sample(s) for each pollutant to be monitored. In general, two types of samples may be taken: grab or composite. Grab samples must be used for pH, cyanide, total phenols, oil and grease, sulfide, and volatile organic compounds. For all other pollutants, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless the Control Authority authorizes time-proportional sampling or grab sampling. Where the Control Authority authorizes time-proportional sampling or grab sampling, the samples must be representative of the discharge, and the decision to allow the alternative sampling must be documented in the Industrial User file for that facility or facilities.

For composite samples, the sample period is usually 24 hours, but if the Industrial User's discharge is not continuous, the permit may specify that the composite sample be collected only during the discharge period. For grab samples, the number of grab samples is specified in the permit (e.g., a grab sample taken after a specified volume of wastewater has been discharged or a minimum of four per day at equal time

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intervals).

3.1.1 Grab Sample

A grab sample is a single, discrete sample collected over a period not exceeding 15 minutes, without any regard to the wastestream's flow. Grab samples may be used when both wastewater flow and pollutant concentrations (or pollutant loadings) are constant over time. Grab samples may also be used for batch discharges, such as a contaminated process tank that is periodically discharged. However, a batch discharge must be homogeneous to be accurately represented by a grab sample.

Grab samples are useful in characterizing an Industrial User's fluctuations or extremes in wastewater flow and quality (i.e., changes in pollutant concentrations or loadings) and, therefore, are useful in identifying slug loads. Such samples are also appropriate to determine compliance with *instantaneous* effluent limits, where a composite sample could mask extreme conditions in the wastewater. The pH parameter can illustrate this concept clearly: a composite sample could exhibit a neutral pH, while individual grab samples could exhibit a wide range of pH.

Grab samples should be used when storing or compositing a sample would alter the concentration or characteristics of pollutants being measured. Parameters that necessitate grab sampling techniques include pH, oil and grease, temperature, total phenol, cyanide, sulfides, and some volatile organics (purgeable halocarbons, purgeable aromatics, acrolein, and acrylonitrile).

3.1.2 Composite Sample

Composite samples are used to measure the average amount of pollutants discharged by an Industrial User during the composite period. Composite samples are preferred when evaluating compliance with 24-hour or daily average concentration limits and mass limits. Samples may be obtained as either time-proportional or flow-proportional.

For a flow-proportional composite sample, each individual aliquot is collected after a defined volume of discharge (e.g., every 2,000 gallons) has passed. Flow-proportional composite samples are collected when both an Industrial User's effluent flow and pollutant concentrations or loadings exhibit irregular changes. For pollutants for which grab samples are not necessary, flow-proportional composite samples should always be used to determine compliance with categorical Pretreatment Standards. For a time-proportional composite sample, each individual aliquot is collected after a defined period (e.g., once every two hours) has passed, regardless of the volume or variability of the rate of flow during that period. Time-proportional composite samples are generally collected under conditions of constant or slightly fluctuating effluent flows. For a nonhomogeneous batch discharge, wastes are stratified in a tank, and the

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effluent's quality will vary over the period of batch discharge. For such a situation, a time-proportional composite sample collected over the period of discharge would be most appropriate. Flow-proportional compositing is usually preferred when effluent flow volume varies appreciably over time. However, the permit writer may specify time-proportional composite samples or grab samples where flow-proportional samples are not feasible and the use of such other sampling techniques would provide a representative sample.

3.1.3 Sample Type for Current Industrial Users

Decorative Industrial Plating (DIP) Sample Type: Grab samples must be used for pH and cyanide. Time-proportional sampling shall be used for all other parameters. Time-proportional sampling shall be a composite of 4 samples taken at 2-hour intervals during normal business hours.

Montana Rail Link (MRL) Sample Type: All samples must be grab samples. One grab sample must be taken prior to discharge and one grab sample must be taken during discharge.

4.1 MONITORING FREQUENCIES

Federal regulations specify a minimum reporting frequency of twice per year to demonstrate *continued compliance* with categorical Pretreatment Standards except when the Control Authority has determined a CIU to be nonsignificant or when the Control Authority has reduced the discharger's monitoring and reporting requirements. The Control Authority will require monitoring and reporting, at least once every 6 months, from all other SIUs. Furthermore, monitoring must be conducted to satisfy BMR, 90-day compliance report, and repeat noncompliance monitoring reporting requirements. In establishing monitoring frequencies, the Control Authority will determine the minimum frequency to provide sufficient representative data to assess compliance and the expense or burden of obtaining such data. Each of the following factors will be considered by the Control Authority as it develops both the Industrial User self-monitoring requirements and its own compliance monitoring program:

- Frequency necessary to obtain data representative of the nature and volume of the Industrial User's wastewaters
- Amount of historical data available to characterize the industry's discharge (industries with no historical data should be sampled more frequently)
- Actual (or potential) impact of the Industrial User's wastes on the operation of the Control Authority's treatment plant, receiving stream, and sludge disposal practices
- Types of pollutants contained in a facility's wastewaters and the concentrations or loadings discharged

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- The quantity of process and other wastewater discharged to the POTW
- Regulatory requirements of any existing Industrial User permits, local sewer use ordinances, POTW policy statements, or federal regulations and policies
- Any seasonal variations experienced in the Industrial User's manufacturing operations and wastewater flow
- Length of the Industrial User's operating day and the number of shifts worked per day
- Industrial User's history of upsets or accidental spills or lack of spill prevention plans for raw materials, process wastewaters, or chemicals stored on-site
- Reliability of the Industrial User's treatment facilities
- Any scheduled discharges of unusual or extraordinary strength or volume (i.e., batch discharges of process tanks or routine cleanup periods scheduled each day, week, or month)
- Compliance (or noncompliance) history of the Industrial User for, at a minimum, the past 2 years
- Expense of monitoring imposed on both the Industrial User and the Control Authority and the resources (labor and equipment) available
- Design dry-weather hydraulic and organic capacity of the POTW
- MAHL of the technically based local limits

In general, frequencies are based on five flow categories using flow as an indication of the potential impact on a 5 mgd treatment plant and the ability of the user to bear the monitoring cost (see Table 3).

TABLE 3
RECOMMENDED INDUSTRIAL SELF-MONITORING FREQUENCIES DURING THE INITIAL COMPLIANCE PERIOD

Industrial flow (gpd)	Conventional pollutants, inorganic pollutants, cyanide, and phenol	GC or GC/MS organics
0–10,000	1/month	2/year
10,001–50,000	2/month	4/year
50,001–100,000	1/week	1/month
100,001–240,000	2/week	2/month
> 240,000	3/week	4/month

Note: Industrial Users subject to TTO standards in the Electrical and Electronic Components, Electroplating, and Metal Finishing categories may elect to implement a Toxic Organics Management Plan and submit periodic certification statements in lieu of performing TTO analyses. Industrial Users subject to TTO standards in the Aluminum Forming, Copper Forming, Coil Coating (Canmaking), and Metal Molding and Casting categories may monitor for oil and grease as an alternative to TTO monitoring.

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The Control Authority has the option to reduce a CIU's monitoring and reporting requirements to once per year under certain conditions (e.g., middle-tier CIU). To qualify for the reduced monitoring and reporting, the discharger must meet all the following conditions:

- The discharger's total categorical wastewater flow does not exceed 0.01 percent of the design dry-weather hydraulic capacity of the POTW, or 5,000 gpd (whichever is smaller, as measured by a continuous effluent flow monitoring device unless the user discharges in batches); 0.01 percent of the design dry-weather organic treatment capacity of the POTW; and 0.01 percent of the MAHL for any pollutant regulated by the applicable categorical Pretreatment Standards for which approved local limits were developed by the POTW.
- The discharger has not been in significant noncompliance, as defined at 40 CFR 403.8(f)(2)(viii), for any time in the past 2 years.
- The discharger does not have daily flow rates, production levels, or pollutant levels that vary so significantly that decreasing the reporting requirement for this discharger would result in data that is not representative of conditions occurring during the reporting period.
- The discharger must notify the Control Authority immediately of any changes at its facility causing it to no longer meet the conditions of 40 CFR 403.12(e)(3)(i) or (ii). Upon notification, the discharger must immediately begin complying with the minimum reporting requirements of 40 CFR 403.12(e)(1).

Other Monitoring Considerations

For operations that are variable, the Control Authority may require increased monitoring during peak operations, seasonal changes, or raw material changes. For batch discharges, monitoring frequencies could be geared to the frequency of discharge. For example, the Control Authority could require a small electroplater that batch discharges once a month to monitor when the batch discharge occurs. Or the Control Authority could decide to require the batch discharger to monitor and submit the monitoring results to the Control Authority before the batch may be discharged.

4.1.1 Monitoring Frequencies

Decorative Industrial Plating (DIP) Monitoring Frequency: pH shall be monitored daily during operation. Cyanide and metals shall be monitored once per quarter. TTOs shall be monitored annually.

Montana Rail Link (MRL) Sample Type: The storage tank shall be monitored prior to discharge and during discharge. Frequency of discharge depends on how quickly the storage tank fills. During months

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with no discharge of the storage tank, "no discharge" is reported and no sampling occurs.

5.1 ANALYTICAL METHODS

The Pretreatment Regulations require that all analyses to determine compliance with categorical Pretreatment Standards be performed in accordance with 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act* and amendments, or with any other test procedures approved by EPA (See 40 CFR 136.4 and 136.5). Analytical techniques for additional pollutants not contained in 40 CFR Part 136 must be performed by using validated analytical methods approved by EPA [40 CFR 403.12(g)(5)]. Requiring everyone to use such EPA-approved test methods ensures that analytical data are obtained uniformly and consistently. The EPA-approved test methods must also be used to determine compliance with state standards and local limits. If multiple methods are approved for the same parameter at 40 CFR Part 136, the analytical method used should have an appropriate quantification limit to determine compliance with the effluent limit. This requirement to use EPA-approved analytical methods should be specified in either the monitoring and reporting section or the standard conditions section of the permit as illustrated in Appendix E, Sample Permit Fact Sheet and Industrial User Permit.

Analytical methods are best determined based on current industry capabilities; therefore, additional information about the analytical methods for each pollutant are not described in detail due to the likelihood of this information becoming outdates with limits of technology improvements.

5.2 pH Meter Calibration

The pH meter shall be calibrated monthly or prior to use if it has not been calibrated in the prior 30 days, and calibration logs shall be maintained.

6.1 REPORTING REQUIREMENTS

SIUs and CIUs are required to submit a characterization of their discharge at the frequency listed in their Industrial User Permit. These periodic compliance reports must contain the following:

6.1.1 The concentration, or production and mass, of regulated pollutants in the Industrial User's effluent

6.1.2 The measured or estimated average and maximum flow rates for the reporting period

6.1.3 Documentation to evaluate compliance with any BMP or pollutant prevention requirement

Pretreatment reporting requirements are described in detail in Table 4. The Control Authority will

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review this table and include applicable reporting requirements in each permit.

The Control Authority will determine appropriate reporting from Industrial Users. When drafting an Industrial User's reporting requirements, the Control Authority will determine and describe the following information in sufficient descriptive detail:

6.1.4 *What* types of information are to be contained in each report (e.g., analytical data, flow data, or production data)

6.1.5 *When* each report is to be submitted to the Control Authority (specifying the dates and frequency for submission)

6.1.6 *Who* is responsible for signing and certifying the reports (e.g., an authorized corporate official)

6.1.7 *Where* the reports are to be sent, including the Control Authority's address and, if appropriate, the name of the person responsible for receiving each report

6.1.8 *How* the reports can be submitted to the Control Authority (e.g., electronic versus hardcopy submittals)

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TABLE 4
INDUSTRIAL USER REPORTING REQUIREMENTS

Required report and citation	Report due date	Purpose of report	Information required
Baseline Monitoring Report (BMR) [40 CFR 403.12(b)(1-7)]	Within 180 days of effective date of the regulation or an administrative decision on category determination	• To provide baseline information on industrial facility to Control Authority • To determine wastewater discharge sampling points • To determine compliance status with categorical Pretreatment Standards	• Identifying information about the facility (name, address, and so on) • List of all environmental control permits issued to the facility • Description of operations • Flow measurements of wastewater discharged to the POTW • Nature and concentration of pollutants discharged to the POTW • Certification of compliance status with categorical Pretreatment Standards • Compliance schedule to attain compliance • Certification of validity of information provided
Compliance Schedule Progress Reports [40 CFR 403.12(c)(1-3)]	Within 14 days of each milestone date on the compliance schedule; at least every 9 months	• To track progress of the industrial facility through the duration of a compliance schedule	• Compliance with appropriate increment of compliance schedule • Reasons for any noncompliance • Actions taken to return to the approved schedule
90-Day Compliance Report [40 CFR 403.12(d)]	Within 90 days of the date for final compliance with applicable categorical Pretreatment Standard; for new sources, the compliance report is due within 90 days following commencement of wastewater discharge to the POTW	• To notify Control Authority as to whether compliance with the applicable categorical Pretreatment Standards has been achieved • If facility is noncompliant, to specify how compliance will be achieved	• Nature and concentration of all pollutants regulated by categorical Pretreatment Standards • Average and maximum daily flow for regulated manufacturing processes • Compliance status (if noncompliant, additional measures needed) • Certification of validity of information provided

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TABLE 4 (Continued)

Required report and citation	Report due date	Purpose of report	Information required
Periodic Compliance Reports for CIUs (not including NSCIUs) [40 CFR 403.12(e)(1)]	Every June and December after the final compliance date (or after commencement of a discharge for new sources) unless the Control Authority increased frequency	• To provide the Control Authority with current information on the discharge of pollutants to the POTW from categorical industries	• Nature and concentration of all regulated pollutants • Average and maximum daily flows discharged to the POTW for the reporting period • Where mass-based units are used, a measure of the mass of pollutants discharged • For industries subject to the production-based standards, an actual average production rate for the reporting period • For industries subject to equivalent mass or concentration limits pursuant to 403.6(c), a reasonable measure of the long-term production rate • Certification of the validity of the information provided • Additional information as required by the Control Authority • For industries subject to BMPs, documentation required to determine compliance with the BMP
Periodic Compliance Reports for CIUs with Pollutant Not Present or Expected to be Present [40 CFR 403.12(e)(2)]	Every June and December after the final compliance date (or after commencement of a discharge for new sources) unless the Control Authority increased frequency	• To certify that a pollutant is not present or expected to be present at a facility	• For facilities that have been granted a waiver of monitoring for a pollutant that has been determined not to be present, a certification statement indicating that there has been no increase in the pollutant in the wastestream because of activities of the user (403.12(e)(2)(v))

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TABLE 4 (Continued)

Required report and citation	Report due date	Purpose of report	Information required
Periodic Compliance Reports for CIUs with Reduced Monitoring Requirements [40 CFR 403.12(e)(3)]	Once every year, unless required more frequently in the categorical Pretreatment Standard or by the Control Authority	• To provide the Control Authority with current information on the discharge of pollutants to the POTW from categorical industries	• Nature and concentration of all regulated pollutants • Average and maximum daily flows discharged to the POTW for the reporting period • Where mass-based units are used, a measure of the mass of pollutants discharged • For industries subject to the production-based standards, an actual average production rate for the reporting period • For industries subject to equivalent mass or concentration limits pursuant to 403.6(c), a reasonable measure of the long-term production rate • Certification of the validity of the information provided • Additional information as required by the Control Authority • For industries subject to BMPs, documentation required to determine compliance with the BMP
Notice of Potential Problems, including Slug Loading [40 CFR 403.12(f)]	Notification of POTW immediately after occurrence of slug load or any other discharge that could cause problems to the POTW	• To alert the POTW of the potential hazards of the discharge	• None specified in General Pretreatment Regulations; other federal, state, and local regulations might address reporting requirements
Noncompliance Notification [40 CFR 403.12(g)(2)]	Notification of POTW within 24 hours of becoming aware of violation	• To alert the POTW of a known violation and potential problem that could occur	• Nature and magnitude of the violation; other information as determined by the POTW

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TABLE 4 (Continued)

Required report and citation	Report due date	Purpose of report	Information required
Periodic Compliance Reports for Noncategorical Users [40 CFR 403.12(h)]	To be determined by the POTW, but at least once every 6 months	• To provide the POTW with current information on the discharge of pollutants to the POTW from Industrial Users not regulated by categorical standards	• Description of the nature, concentration, and flow of the pollutants required to be reported by the Control Authority • For industries subject to BMPs, documentation required to determine compliance with the BMP
Notification of Changed Discharge [40 CFR 403.12(j)]	Before any substantial changes in the volume or character of pollutants in the discharge	• To notify the POTW of anticipated changes in wastewater characteristics and flow that could affect the POTW	• All anticipated changes that could affect the character or volume of the discharge
Notification of Hazardous Waste Discharge [40 CFR 403.12(p)]	No later than 180 days after the discharge of the listed or characteristic hazardous waste	• To notify the POTW of the name of the hazardous waste and type of discharge (batch or continuous)	• The name of the hazardous waste, the EPA hazardous waste number, and the type of discharge • If the user discharges more than 100 kilograms of hazardous waste per calendar month, the user must also submit (to the extent such information is known) an identification of the hazardous constituents contained in the wastes and an estimation of the mass of constituents in the wastestream expected to be discharged during the following 12 months
Notification of Changes Affecting Slug Discharge Potential [40 CFR 403.8(f)(2)(vi)]	Notification of POTW immediately of any changes at the facility that affects its potential for a slug discharge	• To notify the POTW of changes that might require the facility to implement procedures to control slug discharges	• All changes that could affect the potential of a slug discharge

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TABLE 4 (Continued)

Required report and citation	Report due date	Purpose of report	Information required
Annual Certification by NCSIUs [40 CFR 403.12(q)]	At least once a year	• To provide to the POTW a statement that the facility is in compliance with the definition of NCSIU	• The certification statement at 40 CFR 403.12(q) must be signed in accordance with the signatory requirements in 40 CFR 403.12(l)
Notification of Bypass [40 CFR 403.17]	If possible, at least 10 days before the date of the anticipated bypass. *OR* In the event of an unanticipated bypass, a verbal notification of a bypass that exceeds applicable Pretreatment Standards to the POTW within 24 hours from the time the Industrial User becomes aware of the bypass.	• To provide to the POTW a notice of a facility's intentional diversion or an unanticipated bypass of wastestreams from any portion of the facility's treatment facility	• A written submission must be provided within 5 days of the time the Industrial User becomes aware of the bypass. The written submission must contain a description of the bypass and its cause, the duration of the bypass (including exact dates and times), and if the bypass has not been corrected, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

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6.2 *What Types of Information*

Table 5 presents the types of information required for the Industrial User's periodic compliance reports. If an Industrial User is subject to a compliance schedule contained in the permit, the Industrial User must submit those reports no later than 14 days after each milestone date and must describe the progress made, any delays experienced and the reasons for those delays, and steps taken to return to the schedule established.

If the permit contains other compliance schedules (i.e., installation of sampling locations, development and implementation of slug discharge control plans), the permit will require submission of periodic progress reports of the compliance activities and a final compliance date.

The permit may also impose special reporting requirements on CIUs required by the specific categorical pretreatment regulations.

Finally, Table 4 lists additional pretreatment reporting requirements as outlined in 40 CFR Part 403. The table also includes what types of information are necessary for each of these reports. The Control Authority will review Table 4 to ensure that any additional applicable reporting requirements, and the associated information required for each report, are incorporated into the permit.

TABLE 5
FUNDAMENTAL ELEMENTS OF AN INDUSTRIAL USER PERIODIC COMPLIANCE REPORT

- ***Basic Information***. Name of Industrial User, address, and reporting period.
- ***Wastewater Pollutant Sampling and Analysis Data.*** Pollutants monitored, units in which pollutant results are recorded, the date(s) and time(s) samples were taken, sample collection method, the analytical methods used, and the concentration of pollutants.
  - Where the Industrial User must comply with monthly average standards, calculation of the averages must be made and reported.

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TABLE 5 (Continued)

- Where mass limits are imposed, the report must include information on the mass/day discharges along with the supporting concentration and flow data.

- ***Production Data.*** For all other users subject to production-based standards, the user must submit the actual average production rate for the reporting period. For Industrial Users subject to equivalent mass or equivalent concentration limits calculated by the Control Authority, the report must contain a reasonable measure of the user's long-term production rate.

- ***Flow Data Reporting.*** Industrial Users subject to categorical Pretreatment Standards must submit average and daily maximum flow data. That data should include the flow rate, for each wastewater source, used in calculating the Industrial User's limits.

- ***Best Management Practices.*** Documentation of BMP or pollution-prevention activities and any required certifications (e.g., TTO certifications).

- ***Signature of Authorized Representative.*** A signed statement by an authorized representative that certifies the report's validity.

- ***Certification Statement.*** "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. On the basis of my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

  If an Industrial User has certified to a particular condition of a categorical standard, a statement should be included acknowledging the continuing applicability of that certification. For example, metal finishers and electroplaters would provide the following certification statement to conform with alternatives for monitoring Total Toxic Organics (TTO) and their approved toxic organic management plan:

  > On the basis of my inquiry of the person or persons directly responsible for managing compliance with the Pretreatment Standard for Total Toxic Organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing of the last semiannual compliance report. I further certify that this facility is implementing the toxic organic management plan submitted to the Control Authority.

  If an Industrial User has been granted a monitoring waiver, the user must certify on each report that the facility's pollutants in the wastewater have not increased. The user must use the statement below:

  > On the basis of my inquiry of the person or persons directly responsible for managing compliance with the Pretreatment Standard for 40 CFR_____[specify applicable national Pretreatment Standard part(s)], I certify that, to the best of my knowledge and belief, there has been no increase in the level of_____[list pollutant(s)] in the wastewaters because of the activities at the facility since filing of the last periodic report under 40 CFR 403.12(e)(1).

- ***Other Data***
  - Identification of all occurrences of noncompliance
  - Explanation of violations and the corrective action(s) taken
  - Type of sample, sampling time and location, preservation used, and the person taking sample
  - Date the analysis was performed, the analytical methods used, and the person performing analysis
  - Industrial User limits
  - Telephone number of the contact person
  - Identification of any process or treatment changes

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6.3 *When Reports Should be Submitted*

Industrial Users subject to Pretreatment Standards are required to submit reports at a minimum of once every 6 months unless the Control Authority requires the Industrial User to submit reports more frequently, elects to collect all the information that would otherwise be supplied by the Industrial User [40 CFR 403.12(e) and (g)], classifies the CIU as an NSCIU, or reduces the CIU's reporting requirements. Industrial users are required to comply with reporting periods as specified in the permit. A sample is required to be representative of the operations and wastewater discharged during that reporting period. The signatory certification and representative sample requirements apply to the entire period. A permittee cannot certify to something that has not occurred.

To account for violations of a Pretreatment Standard, the user must notify the Control Authority within 24 hours of becoming aware of the violation and must resample and submit results within 30 days of becoming aware of the violation to ensure that the violation is not continuing [40 CFR 403.12(g)(2)]. Furthermore, the regulations at 40 CFR 403.12(g)(6) require an Industrial User subject to the reporting requirements at 40 CFR 403.12 (e) and (h) monitoring any regulated pollutants at the appropriate sampling location more frequently than required by the Control Authority, using the procedures contained at 40 CFR Part 136, to submit the results to the POTW. Frequency for submission of self-monitoring reports should be established by the Control Authority on the basis of the need to evaluate an Industrial User's compliance status and such factors as the following:

6.3.1 Industrial User's size in terms of significance of its flow to the POTW's treatment plant

6.3.2 Nature of the Industrial User's discharge (i.e., the quantity and quality of the pollutants discharged)

6.3.3 Industrial User's compliance history

6.3.4 Industrial User's current self-monitoring frequency

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6.4 *Who Signs the Reports*

The permit should contain a provision that requires reports to be signed by a responsible corporate official. EPA's regulations require that reports by categorical users [40 CFR 403.12(l)] be signed by the following:

6.4.1 By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means

6.4.1.1 a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or;

6.4.1.2 the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions that govern the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

6.4.1.3 By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship, respectively.

6.4.1.4 The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a federal, state, or local governmental entity, or their agents.

6.4.1.5 By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if

6.4.1.6 the authorization is made in writing by the individual described in paragraph (a), (b), or (c);

6.4.1.7 the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates,

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such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

6.4.1.8 the written authorization is submitted to the Control Authority

6.4.1.9 If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the Control Authority before submitting, or together with, any reports to be signed by an authorized representative.

6.5 *Where Reports Are to be Sent*

The reporting requirements section of the permit will clearly identify where the Industrial User should submit all required reports by specifying the appropriate Control Authority department and address. An example of the format and language to require the submission of monitoring reports can be found in Table 5.

6.6 *How Reports May be Submitted*

The Control Authority will specify the methods that Industrial User must use when submitting its required reports. In addition, the Control Authority may require its Industrial Users to submit required reports electronically.

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GLOSSARY OF TERMS

This glossary includes a collection of some of the terms used in this manual and/or in Industrial User permits and an explanation of each term. To the extent that explanations provided in this glossary differ from those in EPA regulations or other official documents, they are intended for use in understanding this manual only.

Approval Authority—The director of a National Pollutant Discharge Elimination System (NPDES) state with an approved state Pretreatment Program and the appropriate EPA Regional Administrator in a non-NPDES state or NPDES state without an approved state pretreatment program [40 CFR 403.3(c)].

Baseline Monitoring Report (BMR)—A report submitted by categorical Industrial Users within 180 days after the effective date of an applicable categorical Standard, which indicates the compliance status of the user with the categorical Standard [40 CFR 403.12(b)].

Best Management Practices (BMPs)—Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in 40 CFR 403.5(a)(1) and (b). BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage [40 CFR 403.3(e)].

Best Professional Judgment (BPJ)—The highest-quality technical opinion of a permit writer, after consideration of all reasonable available and pertinent data or information, forming the basis for the terms and conditions of a permit.

Categorical Pretreatment Standards—Any regulation containing pollutant discharge limits promulgated by EPA in accordance with sections 307(b) and (c) of the Clean Water Act, that apply to specified process wastewaters of industrial categories [40 CFR 403.6 and Parts 405-471].

Categorical Industrial User (CIU)—An Industrial User subject to categorical Pretreatment Standards or categorical Standards.

Combined Wastestream Formula (CWF)—Procedure for calculating alternative discharge limits at industrial facilities in which a regulated wastestream from a categorical Industrial User is combined with other wastestreams *before* treatment [40 CFR 403.6(e)].

Concentration Limit—A limit based on the mass of pollutant per unit volume, usually expressed in milligrams per liter (mg/L).

Control Authority—A POTW with an approved pretreatment program or the Approval Authority in the absence of an approved POTW pretreatment program [40 CFR 403.3(f)].

Conventional Pollutants—Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed; defined by federal regulation [40 CFR 401.16] as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform bacteria, oil and grease, and pH.

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Daily Maximum Limit—The maximum allowable discharge of a pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.

Development Document—Detailed report of studies conducted by EPA for the purpose of developing categorical Pretreatment Standards.

Dilute Wastestream—For purposes of the combined wastestream formula, the average daily flow (at least a 30-day average) from (a) boiler blowdown streams, noncontact cooling streams, stormwater streams, and demineralizer backwash streams (provided, however, that where such streams contain a significant amount of a pollutant, and the combination of such streams, before treatment with an Industrial User's regulated process wastestream(s) will result in a substantial reduction of that pollutant, the Control Authority upon application of the Industrial User, may exercise its discretion to determine whether such stream(s) should be classified as dilute or unregulated. In its application to the Control Authority, the Industrial User must provide engineering, production, sampling and analysis, and such other information so that the Control Authority can make its determination); or (b) sanitary wastestreams where such streams are not regulated by a categorical Pretreatment Standard; or (c) from any process wastestreams that were, or could have been, entirely exempted from categorical Pretreatment Standards pursuant to paragraph 8 of the NRDC v. Costle Consent Decree (12 ERC 1833) for one or more of the following reasons (see Appendix D of 40 CFR 403):

a. The pollutants of concern are not detectable in the effluent from the Industrial User [paragraph (8)(a)(iii)]
b. The pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects [paragraph(8)(a)(iii)]
c. The pollutants of concern are present in amounts too small to be effectively deduced by technologies known to the Administrator [paragraph(8)(a)(iii)]; or
d. The wastestream contains only pollutants which are compatible with the POTW [paragraph (8)(b)(i)] [40 CFR 403.6(e)].

Director—The chief administrative officer of a state or interstate water pollutant control agency with an NPDES permit program and state pretreatment program approved pursuant to section 402(b) of the Clean Water Act [40 CFR 403.3(g)].

Flow Proportional Composite Sample—A sampling method that combines discrete aliquots of a sample collected over time, based on the flow of the wastestream being sampled. Two methods are used to collect such a sample. One method collects a constant sample volume at time intervals that vary by stream flow (e.g., 200 milliliters (mL) sample collected for every 5,000 gallon discharged). The other method collects aliquots of varying volume, by stream flow, at constant time intervals.

Flow-Weighted Averaging Formula (FWA)—A procedure used to calculate alternative limits where wastestreams regulated by a categorical Pretreatment Standard and nonregulated wastestreams combine after treatment but before the monitoring point.

Grab Sample—A sample that is taken from a wastestream on a one-time basis with no regard to the flow of the wastestream and over a period of time not to exceed fifteen (15) minutes.

Indirect Discharge—The introduction of pollutants into a POTW from any nondomestic source regulated under section 307(b), (c), or (d) of the Clean Water Act [40 CFR 403.3(i)].

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Industrial User (IU) or User—A source of nondomestic waste. Any nondomestic source discharging pollutants to a POTW.

Instantaneous Maximum Limit—The maximum limit allowable concentration of a pollutant determined from the analysis of any discrete or composited sample collected independent of the industrial flow rate and the duration of the sampling event.

Interference—A discharge that, alone or in conjunction with a discharge or discharges from other sources, both:

a. Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and
b. Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act [40 CFR 403.3(k)].

Monthly Average Limit—The highest allowable average of *daily discharges* over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

National Pretreatment Standard, Pretreatment Standard, or Standard—Any regulation containing pollutant discharge limits promulgated by the EPA in accordance with section 307 (b) and (c) of the Clean Water Act that applies to Industrial Users. Such terms include prohibitive discharge limits established pursuant to 40 CFR 403.5 [40 CFR 403.3(l)].

National Prohibited Discharges—Prohibitions applicable to all nondomestic dischargers regarding the introduction of pollutants into POTWs set forth at 40 CFR 403.5.

Net/Gross Calculations—An adjustment to categorical Pretreatment Standards to reflect the presence of pollutants in the Industrial User's intake water [40 CFR 403.15].

Ninety (90)-day Compliance Report—A report submitted by a categorical Industrial User, within 90 days following the date for final compliance with applicable categorical Standards, or in the case of a New Source, following commencement of the introduction of wastewater into the POTW, that documents and certifies the compliance status of the user [40 CFR 403.12(d)].

Nonconventional Pollutants—All pollutants that are not included in the list of conventional or toxic pollutants in 40 CFR Part 401.

Nondomestic User—Any person or entity that discharges wastewater from any facility other than a residential unit.

North American Industry Classification System (NAICS) Code—The standard code used by federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

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Pass Through—A discharge that exits the POTW into waters of the United States in quantities or concentration that, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit including an increase in the magnitude or duration of a violation [40 CFR 403.3(p)].

Periodic Compliance Report—A report on compliance status submitted by categorical Industrial Users to the Control Authority [40 CFR 403.12(e)].

Pretreatment—Reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties in wastewater before or in lieu of discharging or otherwise introducing such pollutants into a POTW. The reduction or alteration may be obtained by physical, chemical or biological processes, process changes or by other means, except as prohibited by 40 CFR 403.6(d). Appropriate pretreatment technology includes control equipment, such as equalization tanks or facilities, for protection against surges or slug loadings that might interfere with or otherwise be incompatible with the POTW. However, where wastewater from a regulated process is mixed in an equalization facility with unregulated wastewater or with wastewater from another regulated process, the effluent from the equalization facility must meet an adjusted pretreatment limit calculated in accordance with 40 CFR 403.6(e) [40 CFR 403.3(s)].

Pretreatment Standards for Existing Sources (PSES)—Defined at section 307(b) of the CWA. PSES are national, uniform, technology-based standards that apply to dischargers to POTWs from specific industrial categories (i.e. indirect dischargers). Dischargers subject to PSES are required to comply with those standards by a specified date, typically no more than 3 years after the effective date of the categorical standard. EPA promulgates categorical pretreatment standards for existing sources based principally on Best Available Technology Economically Achievable technology for existing sources.

Pretreatment Standards for New Sources (PSNS)—Defined at section 307(c) of the CWA. PSNS are national, uniform, technology-based standards that apply to dischargers to POTWs from specific industrial categories (i.e. indirect dischargers). The definition of new source is set out in 40 CFR 403.3(m) of the General Pretreatment Regulations. New indirect dischargers have the opportunity to incorporate into their plants the best available demonstrated technologies. Users subject to PSNS are required to achieve compliance within the shortest feasible time, not to exceed 90 days after beginning discharge.

Process Wastewater—Any water that, during manufacturing or processing, comes into direct contact with or results from producing or using any raw material, intermediate product, finished product, by-product, or waste product.

Production-based Standards—A discharge limitation expressed in terms of allowable pollutant mass discharge per unit of production.

Publicly Owned Treatment Works (POTW)—A treatment works as defined by section 212 of the Clean Water Act that is owned by a state or municipality (as defined by section 502(4) of the Clean Water Act). This includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant. The term also means the municipality, as defined in section 502(4) of the Clean Water Act, that has jurisdiction over indirect discharges to and the discharges from such a treatment works [40 CFR 403.3(q)].

Regulated Wastestream—An industrial process wastestream regulated by a national categorical Pretreatment Standard.

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Resource Conservation and Recovery Act (RCRA)—A federal statute regulating the management of hazardous waste from its generation through ultimate disposal. The act contains requirements for waste generators, transporters, and owners and operators of treatment, storage, and disposal facilities (43 U.S.C. 6901 *et seq.*).

Self-monitoring—Sampling and analyses performed by the Industrial User to ensure compliance with a permit or other regulatory requirements.

Significant Industrial User (SIU)—(a) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR chapter I, subchapter N; and (b) any other that (i) discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); or (ii) contributes a process wastestream that makes up 5 percent or more of the average dry-weather hydraulic or organic (BOD, TSS, and such) capacity of the POTW treatment plant; or (iii) is designated as such by the Control Authority because 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)) [40 CFR 403.3(v)].

Significant Noncompliance—An Industrial User is in significant noncompliance if its violation meets one or more of the following criteria:

a. Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all the measurements taken during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits as defined by 403.3(l)
b. Technical Review Criteria (TRC) violations, defined here as those in which 33 percent or more of all the measurements for each pollutant parameter taken during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement, including instantaneous limits as defined by 403.3(l) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH
c. Any other violation of a pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) (daily maximum, long-term average, instantaneous limit, or narrative standard) that the POTW determines has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of POTW personnel or the general public)
d. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare, or to the environment or has resulted in the POTW's exercise of its emergency authority under paragraph 40 CFR 403.8(f)(1)(vi)(B) halt or prevent such a discharge
e. Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance
f. Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules
g. Failure to accurately report noncompliance
h. Any other violation or group of violations, that could include a violation of best management practices, that the POTW determines would adversely affect the operation or implementation of the local pretreatment program

Slug Discharge—Any discharge of a nonroutine, episodic nature, including an accidental spill or a noncustomary batch discharge, which has a reasonable potential to cause interference or pass through, or in any other way violate the POTW's regulations, local limits, or permit conditions [40 CFR 403.8(f)(2)(vi)].

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Slug Discharge Control Plan—A plan prepared by an Industrial User that describes the discharge practices, including nonroutine batch discharges. The plan contains a description of stored chemicals, procedures for immediately notifying the POTW of slug discharges, and, if necessary, procedures to prevent adverse effects from accidental spills.

Slug Load—Any pollutant (including BOD) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b).

Spill Prevention and Control Plan—A plan prepared by an Industrial User to minimize the likelihood of a spill and to expedite control and cleanup activities if a spill occurs.

Split Sample—A portion of a collected sample given to the industry or to another agency to verify or compare laboratory results.

Standard Industrial Classification (SIC) Code—A classification scheme based on the type of manufacturing or commercial activity at a facility; some facilities have several activities that cause them to have more than one code.

Time Proportional Composite Sample—A sampling method that combines discrete sample aliquots of constant volume collected at constant time intervals (e.g., 200 milliliter samples collected every half hour for a 24-hour period). This method provides representative sample only where the sampled stream flow is constant, or where the volume is manually adjusted according to stream flow variation before being added to the composite sample container.

Total Toxic Organics (TTO)—The sum of the masses or concentrations of the specific toxic organic compounds regulated by specific categorical pretreatment regulations that is found in the discharge at specific quantifiable concentrations. (To identify which compounds are regulated, what numeric value is considered *quantifiable*, and what sampling or certification alternatives might be available, refer to the specific categorical regulations.)

Toxic Organics Management Plan—A written plan submitted by Industrial Users in accordance with some categorical Pretreatment Standards as an alternative to TTO monitoring that specifies the toxic organic compounds used, the method of disposal used, and procedures for assuring ensuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW.

Toxic Pollutant—Pollutants or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. Toxic pollutants also include those pollutants listed by the Administrator under CWA Section 307(a)(1) or any pollutant listed under Section 405(d) which relates to sludge management.

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Treatability Manual—Five-set library of EPA guidance manuals that contain information related to the treatability of many pollutants. The manual provides detailed descriptions of industrial processes, potential pollutants from each process, appropriate treatment technologies, and cost-estimating procedures. This manual can be used in developing NPDES permit limitations for facilities and/or pollutants which, at the time of permit issuance, are not subject to industry-specific effluent guidelines. The five volumes that comprise this series include: Vol. I - Treatability Data (EPA-600/8-80-042a); Vol. II -Industrial Descriptions (EPA-600/8-80-042b); Vol. III - Technologies (EPA-600/8-80-042c); Vol. IV - Cost Estimating (EPA-600/8-80-042d); Vol. V - Summary (EPA-600/8-80-042e).

Unregulated Wastestreams—For purposes of the combined wastestream formula, a wastestream that is not regulated by a national categorical Pretreatment Standard and is not considered a dilute wastestream.

Upset—An exceptional incident in which unintentional and temporary noncompliance with the categorical Pretreatment Standards occurs because of factors beyond the reasonable control of the Industrial User. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [40 CFR 403.16(a)]

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