

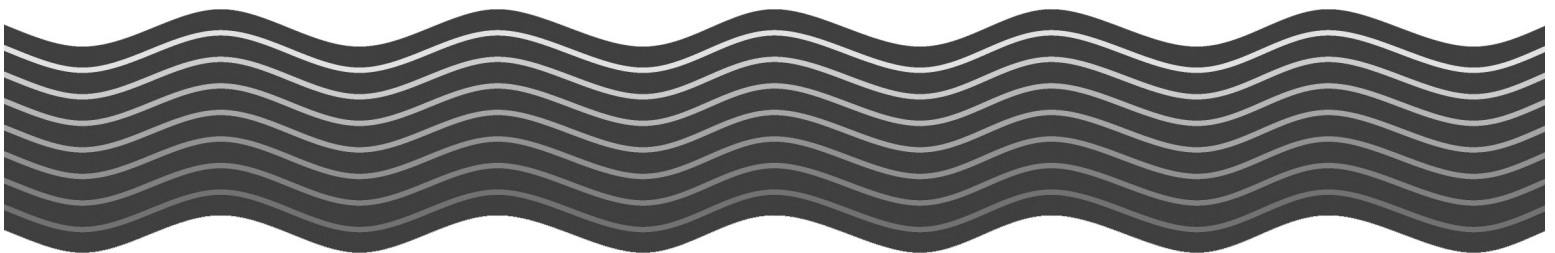
Industrial User Permitting Guidance Manual

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United States Environmental Protection Agency
Office of Water



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DISCLAIMER

The discussion in this document is intended solely as a summary of existing guidance. This document is not a regulation, nor does it substitute for any requirements under the Clean Water Act (CWA) or U.S. Environmental Protection Agency's (EPA's) regulations. Thus, it does not impose legally binding requirements on EPA, states, municipalities, or the regulated community. The general descriptions provided in this document might not apply to a particular situation based on the circumstances. This document does not confer legal rights or impose legal obligations on any member of the public.

Among other things, the document describes existing requirements with respect to industrial dischargers and publicly owned treatment works (POTWs) under the CWA and its implementing regulations at Title 40 of the *Code of Federal Regulations*, Parts 122, 123, 124, and 403 and chapter I, subchapter N. Although EPA has made every effort to ensure the accuracy of the discussion in this document, a discharger's obligations are determined, in the case of directly discharging POTWs, by the terms of its National Pollutant Discharge Elimination System permit and EPA's regulations or, in the case of indirect dischargers, by permits or equivalent control mechanisms issued to POTW industrial users or by regulatory requirements. Nothing in this document changes any statutory or regulatory requirement. If a conflict arises between this document's content and any permit or regulation, the permit or regulation would be controlling. EPA and local decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from those described in this document where appropriate and authorized by EPA regulations, state law, or local ordinances.

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This document is current as of September 2012. EPA may decide to revise this document without public notice to reflect changes in the Agency's approach to implementing pretreatment standards or to clarify and update text. To determine whether EPA has revised or supplemented the information in this document, access the document at <http://www.epa.gov/npdes/pretreatment>.

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HOW TO USE THIS MANUAL

PURPOSE

The U.S. Environmental Protection Agency (EPA), Office of Water, prepared this guidance manual to provide information guidance for developing and issuing permits (or control mechanisms) to nondomestic (Industrial) Users under the National Pretreatment Program. The purpose of this guidance is to assist new permit writers, experienced permit writers, and legal and administrative personnel who are involved in implementing an SIU permitting program in preparing effective and enforceable permits or other control mechanisms.

This manual provides documentation of EPA's recommendations as well as federal requirements for Significant Industrial User (SIU) permit contents and structure. The manual contains many examples of sections and conditions of a permit, as well as complete sample permits and fact sheets. The goal is to furnish this information to permit writers in a reference manual format that they can use throughout the permitting process.

In addition to the people directly responsible for drafting and issuing permits, legal and administrative support staff should be aware of several aspects of the permitting process. For such individuals, the manual provides background information on requirements of the issuance process and discusses the necessary legal authority required to implement an effective program.

USE

It is recommended that all personnel directly involved with the permit drafting and issuance processes scan the entire manual to get an overview of its contents and structure. In scanning the manual, the reader should note any sections that are pertinent to the reader's role in the permitting process.

EPA recommends that new permit writers read all sections of this manual carefully to learn about each phase of the permit drafting and issuance process. An understanding of each section will provide the inexperienced permit writer with an overview of the typical components of an SIU permit and the permit issuance process including legal requirements, permit drafting, public participation, and permit issuance.

Experienced permit writers should carefully study the permitting examples provided to determine if their own permits could be strengthened by modifying or adding the recommended provisions. The manual can also be used as a reference source.

The Control Authority's legal and administrative support personnel should also become familiar with the provisions of the guidance manual with which they will be involved. Such individuals should carefully read the background and issuance procedures sections to ensure that their administrative procedures and legal authority are consistent with applicable requirements. The glossary in Appendix B and the list of acronyms and abbreviations immediately following this section are provided to assist the reader. When terms appear that are unfamiliar, the reader should consult the glossary and list of acronyms and abbreviations.

Finally, the regulated community and public citizens might also be interested in this manual to learn about the legal and technical aspects of issuing industrial user permits.

LIMITATIONS

While this guidance manual gives an overview of the permit writing and issuance processes, it is not intended to address all the specific questions that could arise during the permitting process. Where other pertinent guidance is available, this manual references those documents. The permit writer is, therefore, encouraged to use this manual in conjunction with the following EPA guidance documents:

- *Local Limits Development Guidance*
- *Guidance for Developing Control Authority Enforcement Response Plans*
- *Guidance Manual for the Control of Wastes Hauled to Publicly Owned Treatment Works*
- *Industrial User Inspection and Sampling Manual for POTWs*
- *Multijurisdictional Pretreatment Programs Guidance Manual*
- *Pretreatment Streamlining Rule Fact Sheet 7.0: Best Management Practices (EPA-833-F-06-013)*

Those documents serve as companion documents to this manual and contain technical guidance on developing local limits, specific information on enforcing Pretreatment Standards and Requirements, guidance for controlling hauled waste, information regarding compliance inspections and sampling, guidance on implementing a pretreatment program within multiple jurisdictions, and information regarding best management practices.

Throughout the text of this manual, all references to supplementary guidance material and development documents cite only the document title. Complete citations for all relevant guidance documents are found in the bibliography in Appendix A. Any reference to the *Code of Federal Regulations* (CFR) is followed

by a bracketed citation of the specific section (e.g., [40 CFR Part 403]). References to the *Federal Register* are also bracketed (e.g., [53 FR Part 40562; October 17, 1988]).

In general, each Control Authority has pretreatment concerns unique to its own area, necessitating specific local requirements. Discussion of specific requirements that must be met to comply with local or state laws under which a Control Authority operates is beyond the scope of this document. The permit writer should, therefore, consult with his/her attorney on such issues.

The National Pretreatment Program continues to evolve, and the concepts and procedures recommended here could change with time and experience. For notifications on updates to the National Pretreatment Program, see EPA's website (www.epa.gov/npdes/pretreatment).

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ACRONYMS AND ABBREVIATIONS

The following is an alphabetical list of all acronyms and abbreviations used in this manual. Its purpose is to serve as a quick reference for those who might be unfamiliar with the lettered shortcuts that are commonly used to signify terms and phrases associated with the industrial pretreatment permitting program.

BMPs	Best Management Practices
BMR	Baseline Monitoring Report
BOD	Biochemical Oxygen Demand
BPJ	Best Professional Judgment
CFR	<i>Code of Federal Regulations</i>
CIU	Categorical Industrial User
CWA	Clean Water Act (Public Law 95-217 as amended)
CWF	Combined Wastestream Formula
EPA	U.S. Environmental Protection Agency
FR	<i>Federal Register</i>
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectroscopy
gpd	Gallons Per Day
LEL	Lower Explosive Limit
MAHL	Maximum Allowable Headworks Loading
mgd	Million Gallons Per Day
mg/L	Milligrams Per Liter

ACRONYMS AND ABBREVIATIONS

MTCIU	Middle-tier Categorical Industrial User
NAICS	North American Industry Classification System
NPDES permit	National Pollutant Discharge Elimination System permit issued pursuant to section 402 of the Clean Water Act
NSCIU	Nonsignificant Categorical Industrial User
O&M	Operation and Maintenance
POTW	Publicly Owned Treatment Works
PSES	Pretreatment Standards for Existing Sources
PSNS	Pretreatment Standards for New Sources
QA	Quality Assurance
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
SIC	Standard Industrial Classification
SIU	Significant Industrial User
SWDA	Solid Waste Disposal Act
TOMP	Toxic Organic Management Plan
TSS	Total Suspended Solids
TSDF	Treatment, Storage, and Disposal Facility
TTO	Total Toxic Organics

PART I

Establishing a Permit Program

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CHAPTER 1. BACKGROUND

The National Pretreatment Program's primary goal is to protect Publicly Owned Treatment Works (POTWs) and the environment from adverse impacts that might occur when pollutants are discharged into a sewage system.

The specific pretreatment program goals are as follows:

- Prevent the introduction of pollutants into the POTW that will pass through the treatment works or are otherwise incompatible with treatment
- Prevent the introduction of pollutants that could interfere with POTW operations, including interference with the POTW's chosen sewage sludge use and disposal practices, as well as pollutants that could threaten worker health and safety
- Improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges

Discharges to a POTW have the potential to cause the POTW to violate its National Pollutant Discharge Elimination System (NPDES) permit if the treatment system is not able to adequately remove the pollutant contained in the discharge or the pollutant otherwise damages or disrupts operations of the POTW. Industrial discharges to POTWs have historically been a significant source of pollutants in our nation's waters. Certain industrial discharges can interfere with the operation of POTWs, leading to the discharge of untreated or inadequately treated wastewater into rivers, lakes, and such. Some pollutants are not compatible with biological wastewater treatment at POTWs and may pass through the treatment plant untreated. This *pass through* of pollutants affects the surrounding environment, occasionally causing fish kills or other detrimental alterations of the receiving waters. Even when POTWs have the capability to remove toxic pollutants from wastewater, the toxics can end up in the POTW's sewage sludge, which in many places is land applied to food crops, parks, or golf courses as fertilizer or soil conditioner.

The Clean Water Act (CWA or the Act) addresses this problem by requiring the U.S. Environmental Protection Agency (EPA) to promulgate federal standards for the pretreatment of wastewater discharged to a POTW [33 U.S.C. § 1317(b)(3)]. Section 307(d) of the Act prohibits discharge in violation of any pretreatment standard [33 U.S.C. § 1317(d)]. The CWA prohibits the *introduction* of pollutants into a POTW that might pass through or interfere with the POTW and its operations. *Discharge of a pollutant* is a term specifically defined in the CWA to mean the discharge of a pollutant to navigable waters, and such discharges are generally prohibited except in compliance with the Act and a permit under section 402 of

the Act. While this document uses the word *discharge* in its commonly understood meaning when referring to the introduction of pollutants into a POTW, such a discharge is not a CWA discharge of pollutants to navigable waters.

To address *indirect discharges* from industries to POTWs, EPA has established the National Pretreatment Program as a component of the NPDES Permitting Program. The National Pretreatment Program requires industrial and commercial dischargers to treat or control pollutants in their wastewater before discharge to POTWs. EPA has chosen to promulgate pretreatment standards at the same time it promulgates effluent limitations guidelines for industry categories of direct dischargers under sections 301(b) and 304(b) of the Act [33 U.S.C. § 1311(b) and 1314(b)]. These pretreatment regulations are applicable to industrial indirect dischargers—those discharging to POTWs—and are known as categorical pretreatment standards. EPA has also developed other nationally applicable pretreatment standards (*national pretreatment standards*) under section 307(b) in its General Pretreatment Regulations for Existing and New Sources of Pollution (Pretreatment Regulations) at 40 CFR Part 403. Such pretreatment standards are applicable to any user of a POTW, defined as a source of an indirect discharge [40 CFR 403.3(i)].

These national pretreatment standards include (1) a general prohibition and (2) specific prohibitions. The general prohibition prohibits any user of a POTW from introducing a pollutant into the POTW that will cause pass through or interference. EPA's regulations define both pass through and interference. *Pass through* is defined as a discharge that exits the POTW into waters of the United States in quantities or concentrations 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. *Interference* includes a discharge that, alone or in conjunction with a discharge from other sources will, among other things, prevent sewage sludge use in compliance with described regulatory provisions including section 405 of the Act [40 CFR 403.3(k)(2)]. In addition, under the Pretreatment Regulations, certain POTWs must develop and enforce local limits to implement the general and specific prohibitions of section 403.5(a)(1) and (b). Local limits that are developed by a POTW in accordance with the regulations are pretreatment standards for purposes of section 307(d) of the CWA [40 CFR 403.5(d)]. See also 40 CFR 403.3(l) (“The term *National Pretreatment Standard*, *Pretreatment Standard*, or *Standard* ... includes any prohibitive discharge limits established pursuant to § 403.5.”).

Finally, states and POTWs always have the option of establishing more stringent requirements if such requirements are authorized and necessary, pursuant to their state or local law. Generally, this document describes only the National Pretreatment Program requirements established pursuant to the CWA and

implementing regulations. Where state or local requirements are implemented in the same control mechanism, the control mechanism should clearly identify the applicable local or state regulation or enabling legislation. (For a discussion of other conditions in IU permits based on state or local requirements, see Section 3.1.2.7.) Therefore, each the pretreatment program can be a mixture of federal, state, and local standards and requirements.

1.1 PRETREATMENT PROGRAM DEVELOPMENT

The General Pretreatment Regulations [40 CFR 403.8(a)] require all POTWs with design flows greater than 5 million gallons per day (mgd) and receiving industrial discharges that pass through or interfere with the operation of the POTW, or are otherwise subject to Pretreatment Standards, to develop local pretreatment programs (unless the state government has elected to administer the local program). EPA or a state authorized to implement a state pretreatment program may require other POTWs to implement pretreatment programs. It is assumed for the purposes of this manual that the POTW issuing Significant Industrial User (SIU) control mechanisms has an approved pretreatment program and is, thus, the *Control Authority* responsible for administering and enforcing the pretreatment program. The POTW's pretreatment program implementation and enforcement responsibilities are in the POTW's NPDES permit, and failure to adequately fulfill such activities constitutes an NPDES violation and could subject the POTW to enforcement actions.

States with approved pretreatment programs are responsible for overseeing and coordinating the development and approval of local pretreatment programs. Before state approval is obtained, EPA is the Approval Authority for local pretreatment programs. (NPDES states must receive EPA approval before they may function as Approval Authorities for pretreatment purposes. The conditions for approval are found at 40 CFR 403.10. Before this approval, EPA serves as the pretreatment Approval Authority, even where the state issues NPDES permits.) However, states may initiate pretreatment program activities even before their state program is approved.

EPA's General Pretreatment Regulations require POTWs to use a control mechanism that ensures that SIUs meet all applicable Pretreatment Standards and Requirements. Furthermore, at the discretion of the POTW, this control may include the use of general control mechanisms (e.g., general permits) and individual control mechanisms (e.g., individual permits). Before using general control mechanisms, the Control Authority must ensure that it has the legal authority to implement general control mechanisms.

Associated procedures for issuing general control mechanisms must be incorporated into the approved program.

Even though the federal regulations state that POTWs can use permits, orders, or other similar means to control SIUs' discharges, it is EPA's experience that the permit is the most effective means of ensuring that industrial users are aware of all applicable pretreatment requirements. Permits allow for the systematic integration of all applicable requirements and, if properly structured, can greatly facilitate enforcement if noncompliance occurs. Therefore, EPA recommends that POTWs satisfy the control mechanism requirement [40 CFR 403.8(f)(1)(iii)] and the requirement that the POTW have procedures to notify SIUs of applicable Pretreatment Standards [40 CFR 403.8(f)(2)(iii)] by issuing permits to SIUs (for further details, see 55 FR 30082; July 24, 1990). Regardless of the type of control mechanisms the POTW uses, each control mechanism issued to an SIU must contain all the minimum federal requirements.

Throughout this document, the terms *permit* and *control mechanism* are used interchangeably.

1.2 INDIVIDUAL PERMITS OR GENERAL CONTROL MECHANISMS

POTWs are required to issue control mechanisms to SIUs [as defined at 40 CFR 403.3(v)(1)]. Individual permits or general control mechanisms authorize the discharge of wastewater to a POTW upon condition that the discharger complies with the permit terms. An SIU permit is effective for only a limited period and should be revocable by the issuing authority at any time for just cause. In addition, the Control Authority's legal authority will typically include a provision that forbids the discharge of industrial wastewater from an SIU without a current Industrial User permit.

An individual permit or general control mechanism should describe, in a single document, all the duties and obligations of the permittee including all applicable Pretreatment Standards and Requirements. At a minimum, it must include the following [40 CFR 403.8(f)(2)]:

- Prohibited discharge standards and applicable categorical standards, local limits
- Effluent limits (including Best Management Practices [BMPs]) that are based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and state and local law
- Monitoring and reporting requirements
- Statement of permit duration

- Statement of nontransferability
- Statement of applicable civil and criminal penalties
- Requirements to control slug discharges if determined by the POTW to be necessary

Permits should not simply reference the applicable laws, but they must contain effluent limitations (expressed in terms of concentration or mass of pollutants that may be discharged over a given period including applicable BMPs), schedules for monitoring and reporting, requirements regarding sampling location and scope, and a description of potential civil and criminal penalties and liabilities, as set forth by the POTW's legal authority. Such conditions must reflect the most stringent of applicable federal, state, and local Pretreatment Standards and Requirements.

In many Industrial User permit programs, permittees are given an opportunity to review and comment on draft permits or challenge permit terms administratively within a specified period. If the permit is not challenged upon issuance, or if all opportunities for challenge of the final permit are exhausted, in most states, it becomes binding on the permittee. Any violation of the permit is enforceable simply by proving that the permit included a certain term and that the term was violated. The POTW should determine the appropriate administrative appeals procedures as allowed under their state and local law.

1.3 WHO ISSUES PERMITS

POTWs with approved pretreatment programs are required to issue Industrial User permits or other authorized control mechanisms to their Industrial Users. Such POTWs are *Control Authorities* in the National Pretreatment Program. In states with approved state pretreatment programs, the state may assume responsibility for implementing POTWs' local pretreatment programs [40 CFR 403.10(e)]. In such cases, the state is the Control Authority and is required to issue Industrial User permits or other authorized control mechanisms to the Industrial Users. In other cases, where the approved state pretreatment program selectively requires certain POTWs to develop approved POTW programs and assumes the responsibility for implementing other municipal programs, the state remains the Control Authority and issues the Industrial User permits to those facilities where it has retained that responsibility [40 CFR 403.10(e) and (f)]. Consequently, an Industrial User permit may be issued by those states rather than by POTWs. Of course, all states are free to issue such permits or other control mechanisms as they deem necessary to carry out the requirements of state law; this might be particularly appropriate where SIUs are discharging to a POTW that does not have an approved pretreatment program.

1.3 WHY PERMITS ARE RECOMMENDED

The Control Authority must be able to regulate through permits, orders, or similar means the contributions of its Industrial Users to ensure that the requirements of the General Pretreatment Regulations are met [40 CFR 403.8(f)(1)(iii)]. As noted above, EPA believes that in most circumstances a permit program is the most effective mechanism for controlling wastewater discharges.

A permit system provides a mechanism for the Control Authority to control the discharges of Industrial Users to the POTW through an administrative process that facilitates understanding of Pretreatment Standards and Requirements. The permitting process allows the Control Authority to clearly communicate and address issues with an Industrial User before permit issuance. A permit clearly identifies all the permittee's responsibilities and obligations in a single document, thereby increasing the understanding of the Industrial User with regard to pretreatment requirements. The permit issuance process itself leads to greater understanding and increased compliance rates by fostering dialogue and development of a one-on-one relationship between the POTW and an Industrial User.

Permit modification procedures can be established to provide flexibility to accommodate changes initiated by the Control Authority or by the Industrial User. For example, if an Industrial User significantly expands its process operation, the permit can be modified to reflect the increased wastewater discharge. In addition, the POTW may revise its local limits requiring a change to the Industrial User's permit. The ability to modify or revoke and reissue a permit also enables the Control Authority to accommodate changes in federal, state, and local requirements.

Permits are also easily enforced, provided that permit conditions are written clearly and concisely and require specific actions on the part of the Industrial User. For example, the Pretreatment Regulations require periodic monitoring by the Industrial User. Thus, the permit must state that an Industrial User *must* self-monitor rather than stating that the user *should* or *may* monitor. Permits allow the POTW and interested citizens to measure the performance of the Industrial User against the permit conditions to determine compliance. In addition, where permittees are given only a limited period to challenge the substantive content of an Industrial User permit, enforcement actions brought after the limited time for review need only demonstrate noncompliance with the specific conditions of the permit; the calculation of applicable discharge limitations from narrative statutory and regulatory provisions is not at issue.

CHAPTER 2. PERMIT ISSUANCE PROCESS

Before a Control Authority can begin issuing individual permits or general control mechanisms to Industrial Users, it must have adequate legal authority to do so, and it must make some basic policy decisions regarding how to identify possible Industrial Users, who will be required to obtain permits, when permits will be issued, the effective period or duration for permits, and the circumstances under which a permit may be modified or terminated. The following sections address factors that the Control Authority should consider when answering such questions and establishing its legal authority to implement and enforce its pretreatment program.

2.1 HOW TO IDENTIFY INDUSTRIAL USERS

The Control Authority is required to establish and implement procedures for identifying Industrial Users as part of its program responsibilities [40 CFR 403.8(f)(2)]. The industrial community must be accurately identified by the Control Authority. The Control Authority must prepare and maintain a list of industrial users as part of the approved POTW Pretreatment Program [40 CFR 403.8(f)(6)]. Consequently, an Industrial Waste Survey is a useful tool to first identify and characterize industrial discharges to the POTW treatment plant. Below are additional methods frequently incorporated into the POTW procedures in order to maintain the list:

- A requirement that new industries fill out applications for discharge when they apply for business licenses
- Communications with other city departments (i.e., water, utilities, health and safety, and building departments) concerning new industries in the POTW service area
- Continual review of business license records or other standard listings of industrial firms, such as Chamber of Commerce rosters or the telephone directory
- Ongoing inspection and monitoring activities
- Periodic expiration of permits and subsequent reapplication by permit holders
- Periodic mailing of a survey questionnaire to the industry accompanied by a request to update the information

The Control Authority must submit to the Approval Authority an updated list of its Industrial Users at least annually [40 CFR 403.12(i)]. In addition to programmatic requirements expressed in the General Pretreatment Regulations at 40 CFR Part 403, POTWs should also be aware of the requirement to identify their Industrial Users as part of their POTW NPDES Permit application [40 CFR 122.21(j)(6) and (7)] and also to report any new or substantially changed pollutant introduced during the NPDES Permit term [40 CFR 122.42(b).]

2.2 WHO NEEDS A PERMIT

One of the first decisions to be made when establishing a permit program is to determine which Industrial Users will be required to obtain a permit. At a minimum, EPA requires that permits be issued to all SIUs. The Control Authority must establish a definition of an SIU to clearly establish which Industrial Users are required to apply for and obtain permits to discharge. The Control Authority's definition of SIU must be at least as stringent as the federal definition as listed at 40 CFR 403.3(v).

EPA has defined *Significant Industrial Users* as the following:

- All Industrial Users subject to categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, subchapter N.—known as Categorical Industrial Users (CIUs).
- Any other Industrial User that discharges an average of 25,000 gallons per day (gpd) or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blowdown wastewater); contributes a process wastestream that 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 Control Authority on the basis that the Industrial User has a reasonable potential to adversely affect the POTW's operation; or for violating any Pretreatment Standard or Requirement.

Furthermore, some categorical pretreatment standards require a facility to not discharge certain process wastewaters. For those facilities, the permit writer should evaluate whether there is a potential for the facility to actually discharge the prohibited process wastewater into the POTW. If the facility has no potential (e.g., no sewer connection) of discharging the prohibited wastewater, permit issuance to those users is discretionary. Similarly if the facility uses a 100 percent recycling treatment system and has no potential for discharge of the prohibited process wastewater, the facility would also not be considered a CIU. Regardless, CIUs that employ a 100 percent recycling system or claim no discharge of regulated process wastewater should be thoroughly evaluated through an on-site inspection to determine if there is

any reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement due to accidental spills, operational problems, or other causes. If the Control Authority concludes that no regulated process wastewater can reach the POTW, and therefore, the facility has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the facility need not be designated a CIU or an SIU, as defined by 40 CFR 403.3(v).

But if an Industrial User, subject to a federal standard of no discharge of certain process wastewaters or prohibition of discharge of particular pollutants, has a potential to discharge a wastestream that is subject to the federal standard, the user must be considered a CIU and, thus, an SIU (at least until a compliance record can be established and the Control Authority can assess if the preconditions for a Nonsignificant Categorical Industrial User (NSCIU) are satisfied. See below regarding NSCIU.). Therefore, these facilities must be permitted. (For a summary of categorical sectors with prohibited discharge requirements, see Appendix G.)

Other factors to consider when determining which additional Industrial Users the Control Authority should permit include the following:

- Pollutants being introduced
- Spill potential
- Slug discharge potential
- Previous compliance history
- Potential for causing the POTW to violate its NPDES permit
- Potential for causing difficulties with sludge use or disposal

The federal Pretreatment Regulations allow, at the Control Authority's discretion, the classification of certain CIUs as nonsignificant and, thus, not subject to permitting. Before implementing this provision, the Control Authority must verify that it is authorized under state law and ensure that the POTW has the legal authority to implement such provision. As defined in the Pretreatment Regulations at 40 CFR 403.3(v)(2), an NSCIU is a discharger that, among other things, never discharges more than 100 gpd of total categorical wastewater to the POTW and never discharges any untreated concentrated wastes. If an Industrial User is determined to be an NSCIU, the user is no longer an SIU and is therefore not required to be controlled through a permit or other control mechanism although the Control Authority, of course, may choose to do so. Regardless of whether an Industrial User is determined to be an NSCIU, it is still a

categorical discharger and, as such, is still required to comply with applicable categorical Pretreatment Standards and related reporting and notification requirements at 40 CFR 403.12(b), (c), (d), (f), (j), (l), and (p). Furthermore, the Control Authority still must perform the same minimum oversight of an NSCIU that is required for other facilities that are not SIUs, including notifying the CIU of its status and requirements, reviewing required reports, verifying that daily regulated flow rates do not exceed 100 gpd, random sampling and inspection, and investigating noncompliance as necessary.

Once the permitting program has become more firmly established, or if problems with specific pollutants are identified, the Control Authority should consider expanding its program beyond the SIUs, such as waste haulers, restaurants, auto maintenance facilities, and dental and medical facilities. Consequently, the POTW should also establish the legal authority to issue permits to non-SIUs. For further discussion on permitting waste haulers, see the *Guidance Manual for the Control of Wastes Hauled to Publicly Owned Treatment Works*.

2.3 WHEN TO ISSUE A PERMIT

Once all potential permittees have been identified, the permits should be issued as soon as possible. If the Control Authority will be permitting several SIUs, it might be helpful to issue the permits with staggered expiration dates to balance the permit reissuance workload in the future. Control Authorities should plan to reissue permits before they expire.

Many Control Authorities require existing SIUs to apply for initial permits within 6 months of the adoption of local ordinance provisions authorizing a permit program. New SIUs permits must be issued before SIUs begin discharging to the sewer system. Control Authorities have typically required each SIU to submit an application for permit reissuance at least 90 days before the expiration date of the applicable existing permit to provide the Control Authority with sufficient time to adequately evaluate the discharge, develop permit conditions, and issue the permit on or before expiration.

The Control Authority's most important task is to have all SIUs under enforceable control mechanisms that contain specific discharge conditions that are based on all available information at the time of permit issuance. In instances where a Control Authority has a large number of SIUs, the initial permit issuance, including thorough site inspections, could create a considerable backlog of Industrial Users waiting to be permitted. The Control Authority might want to issue short-term permits or full-term permits with reopener conditions allowing permit modification when more complete information has been obtained. In addition, the Control Authority might want to determine whether to implement general control

mechanisms for similar nondomestic dischargers that have similar processes and wastewater characteristics (for further details on general control mechanisms, see Section 2.4.2 of this manual). However, such control mechanisms must still contain the minimum elements required by the Pretreatment Regulations (outlined in Chapter 5) and should be based on all existing data available to the permit writer at that time.

2.4 WHAT TYPES OF PERMITS TO USE

Keeping in mind that the purpose of issuing permits is for the Control Authority to notify Industrial Users of the specific standards and requirements that they must meet, the Control Authority could choose to develop and issue different types of permits for different reasons. The choice might result in improved communication of requirements to the permittee or could result in a resource savings for the Control Authority. Whether the Control Authority chooses to issue individual, facility-specific permits or general control mechanisms to multiple facilities, a control mechanism issued to SIUs must still contain the minimum elements required by the Pretreatment Regulations.

2.4.1 Individual Control Mechanisms

The most traditional type of control mechanism is the individual, facility-specific permit. Although this permit might contain general and specific prohibitions, categorical standards, and local limits that are very similar or the same as those issued to other facilities in the Control Authority service area, the bases of the standards and requirements are individually considered and determined. These types of permits are appropriate when the Control Authority might have special circumstances that are unique to a single facility. For example, individual control mechanisms (and not general control mechanisms) will be necessary when issuing permits for discharges where the Categorical Pretreatment Standards are production-based and where the Categorical Pretreatment Standards are expressed as mass of pollutant discharged per day because the Categorical Pretreatment Standards is not expressed as a single number but must be calculated for the specific user. Similarly, an individual control mechanism will be necessary in other circumstances requiring adjustments or calculation to determine the allowable discharge under the pretreatment standard, e.g., where wastestreams subject to categorical standards are combined with other wastestreams before a sampling point or where net/gross allowance is granted.

2.4.2 General Control Mechanisms

In addition to individual Industrial User permits, the Control Authority may have the option to issue general control mechanisms to its Industrial Users. Provided that the approved POTW's pretreatment program includes the general control mechanism provisions in accordance with 40 CFR Part 403 and the state regulations allow for this provision, the Control Authority may use a general control mechanism for facilities that meet the following minimum criteria for being considered substantially similar:

- Involve the same or substantially similar types of operations
- Discharge the same types of wastes
- Be subject to the same effluent limitations
- Be subject to the same or similar monitoring
- In the opinion of the POTW, be more appropriately controlled under a general control mechanism than under individual control mechanisms

Using general control mechanisms allows the Control Authority to allocate resources more efficiently and to provide timelier permit coverage.

General control mechanisms would be an available tool for permitting similar SIUs that are subject to concentration-based standards or BMPs (or both). However, general control mechanisms are not available for SIUs regulated by categorical Pretreatment Standards expressed as mass limits, which are inherently unique to each user. The one exception to such a situation is where the POTW has imposed the same mass-based local limit and any categorical Pretreatment Standards that are expressed as concentration limits or BMPs on a number of facilities. In addition, general control mechanisms are not available for Industrial Users whose limits are based on the Combined Wastestream Formula (CWF) or Net/Gross calculations, or other calculated categorical Pretreatment Standard equivalents [40 CFR 403.6(e) and 40 CFR 403.15].

Before issuing general control mechanisms, the Control Authority should consider how it will notify SIUs, subsequent to their filing a written request of coverage, that they are authorized to discharge under the general control mechanism. In addition, the Control Authority should consider how it will memorialize certain facility-specific factors such as sampling locations and any monitoring waivers (e.g., pollutants not present).

In situations where a CIU has requested both coverage under a general control mechanism and a monitoring waiver, it is the Control Authority's decision whether to exclude the CIU with sampling waivers from coverage under a general control mechanism. If the Control Authority believes that a general control mechanism is still appropriate for a CIU with monitoring waivers to be covered under a general control mechanism, the Control Authority should determine what mechanism it will use to incorporate facility-specific monitoring waivers into a general control mechanism. Some possible mechanisms for addressing facility-specific monitoring waivers include issuing a separate monitoring supplement to the general control mechanisms for the individual CIUs, using the waiver approval notice as a facility-specific modification to the general control mechanism, or appending the general control mechanism with specific monitoring waivers [70 FR 60147; October 14, 2005].

2.5 PERMIT DURATIONS

An Industrial User permit must not be issued for an indefinite term. The regulations at 40 CFR 403.8(f)(1)(iii) require both individual and general control mechanisms to be limited to a maximum 5-year period; however, local or state law may mandate a shorter maximum duration. A short-term permit is recommended where the permit writer knows that the Industrial User is planning a major process change or the business has been advertised for sale. Moreover, a short-term permit is also advisable where the permit writer is aware of proposed changes in the federal, state, or local pretreatment program that might significantly affect how the user will be regulated in the future (e.g., a revision to include a categorical Pretreatment Standard). The permit writer should insert a condition to allow the Control Authority to *reopen* the permit when changes occur or, if authorized to do so, may simply choose to modify the permit under its general modification authority (see Section 2.6 below).

2.6 WHEN TO MODIFY OR TERMINATE PERMITS

2.6.1 Permit Modifications

Control Authorities must be able to revise their individual permits or general control mechanisms to implement revisions in federal, state, and local program requirements and make mid-course corrections or adjustments to reflect significant changes in the user's circumstances. At a minimum, the Control Authority's ordinance should always provide (and the permit should indicate) the authority for the Control Authority to modify the permit when there is good cause to do so. The ordinance may also detail the circumstances that represent good cause for modification. Generally speaking, permits should not be modified to make discharge standards less stringent where the user is in compliance with the current

permit conditions and no changes in operations justifying a relaxation of the permit are involved.

Common justifications for modifying permits include the following:

- Alterations in the Industrial User's operations, including production rates, that result in new pollutant contributions or substantial changes (increases or decreases) in the amount of pollutants discharged or the volume of wastewaters discharged
- New information that was not available at the time the permit was issued
- New federal, state, or local requirements promulgated since the time of permit issuance (e.g., revised categorical standards or local limits)
- Correcting technical mistakes, erroneous interpretations of federal, state or local law, or typographical errors

To the extent that the Control Authority allows Industrial Users or interested members of the public to request permit modifications, it is recommended that such requests be made in writing and include facts or reasons that support the request. If the Control Authority is required to, or routinely provides, public notice of draft permits, any proposal for a significant modification should also be subjected to similar public scrutiny. Public participation in the permit issuance process is discussed further in Section 2.8 of this manual. To avoid nonproductive paperwork, the Control Authority might wish to structure its procedures so that minor modifications to the permit need not be subject to the public notice procedure. The following typically qualify as minor changes:

- Correcting typographical errors
- Imposing more frequent monitoring or reporting conditions
- Changing interim compliance dates in compliance schedules (which will *not* affect the final compliance date)

Generally, a permit can be modified in a number of ways. One method, where extensive modifications are necessary, is to reissue an entire new permit with the modifications incorporated. Another method, if only one section of the permit needs modification, could be to issue an addendum to the existing permit.

Addendums issued separately from the permit could be overlooked or misplaced, so the Industrial User should be instructed to replace the original section of the permit that is being modified with the addendum or attach the addendum to the permit. The POTW should clearly document the modification and include the modified permit section in the administrative file.

When modifying a permit, the permit writer should allow a reasonable time frame for the Industrial User to comply with the new or changed conditions if the user cannot meet them at the time of the modification and if allowed by law. If such new or changed conditions are the result of new or changed categorical pretreatment regulations, the regulations will stipulate the compliance period. The Control Authority cannot extend the federal compliance period. Of course, if the Industrial User is already complying with the modified condition, no compliance or *grace period* should be provided. The compliance period must be clearly designated in the modified permit. In no event, however, may a compliance schedule relieve the user of its duty to comply with currently applicable Pretreatment Standards and Requirements.

2.6.2 Permit or Discharge Terminations or Suspensions

Situations could arise during the effective period of a permit that require the Control Authority to suspend or terminate the Industrial User's authorization to discharge into the sewer system. The General Pretreatment Regulations require, as a condition for an approved pretreatment program, that the Control Authority has the authority to terminate the Industrial User's discharge if it presents or might present an endangerment to the environment or if it threatens to interfere with the operation of the treatment works [see 40 CFR 403.8(f)(1)(vi)(B)]. Use of permit suspensions or terminations should be included in the Control Authority's enforcement response plan. Development of such a strategy is described in EPA's *Guidance for Developing Control Authority Enforcement Response Plans*.

2.7 PERMIT TRANSFERABILITY

The Control Authority must be given prior notification of owner/operator transfers and be given the opportunity to question the new owner/operator regarding plans to redesign or otherwise change the process or management practices at the facility. The Control Authority should, therefore, require advance written notice of all proposed owner/operator transfers, preferably at least 30 days in advance of the transfer. In addition, if the Control Authority does not wish to provide for transfers for changes in owner/operator, it may simply revoke the existing permit and reissue a new permit to the new owner/operator. The Control Authority must clearly specify permit non-transferability requirements in the Industrial User permit.

2.7.1 Change in Ownership

When the Control Authority is satisfied that the transfer involves only a change in owner/operator, the permit may be modified and a new owner specified without changing any of the other permit conditions. The following procedures are recommended to implement this type of permit transfer:

- The current owner/operator must submit to the Control Authority, at least 30 days in advance of the proposed transfer date, a signed and certified document describing the anticipated transaction and identifying the transfer date.
- The notice must include
 - A written agreement between the current and future owner/operator that the permit held by the current owner/operator, together with all privileges and obligations bestowed through it, be transferred to the future owner/operator effective as of the specified transfer date.
 - A signed statement by the future owner/operator that it has no imminent intention of modifying operations at the permitted facility in any manner that could result in a discharge from the facility that is different from the discharge quality and quantity of the existing facility without prior notification as required by the permit.

These documents should be signed and certified by individuals with authority to execute official documents on behalf of the company represented.

The Control Authority must modify the existing permit to incorporate the new owner information and make the permit effective on the date that the ownership changes.

2.7.2 Modify or Revoke and Reissue

If the Control Authority believes that the change in owner/operator at a permitted facility will result in a substantial change in process, operation, or management practices at the facility or if local or state law prohibits permit transfers, the Control Authority should formally modify or revoke and reissue the existing permit. In such a case, the procedure should be the same as if the user is a new connection, and the Control Authority should follow all application and permit issuance procedures.

2.8 PUBLIC PARTICIPATION

Drafting the permit should be a collaborative process, involving open communication between the Control Authority and the Industrial User. Communication between the permit writer, the Industrial User, and the public is frequently a legal requirement and should always be encouraged. One way for Control Authorities to encourage public involvement is by providing public notice of permit development activities and accepting comments on draft permits. Alternatively, the Control Authority might wish to hold a public hearing on draft permits. Local law may require some sort of public notice of and opportunity to comment on the draft permit, such as publishing a notice in a local newspaper, notifying specific individuals on a Control Authority's mailing list, or publicizing permits during public meetings of sewage districts, city councils, town meetings, or in a bulletin or newsletter. Such notice is helpful to explain the Control Authority's actions and could be particularly important if any possibility exists that the permit might become controversial. Under EPA's pretreatment regulations, a Control Authority with an approved pretreatment program must provide individual notice to persons or groups who have requested such notice and provide an opportunity to respond when new or modified specific limits are developed by the POTW (40 CFR 403.5(c)). Specific or local limits approved by the Approval Authority through the program approval or substantial program modification process (in accordance with 40 CFR 403.11 and 40 CFR 403.18 (c), respectively) satisfy the 403.5(c) notice requirement. However, if the POTW develops or modifies any specific prohibition or limit (for example changes to the pH limit or reallocation of the maximum allowable industrial loading that were not part of the program approval process or substantial program modification approval process, the POTW must follow the individual notice requirement in 403.5(c) before the new limits can be deemed pretreatment standards.

Public participation can occur at several points in the permit development process. Public involvement during permit development, including discussions with the applicant, allows the permit writer to identify and resolve issues that are of concern by editing a draft permit before it is made final. Those discussions might provide a source of supplementary data that could fill in gaps and omissions or clarify ambiguities in the permit application. Such communication often leads to a better understanding by the permit writer of the Industrial User's process and allows the Industrial User because the user gains a clearer picture of the Control Authority's expectations. Therefore, EPA encourages Control Authorities to involve the permittee and the general public as much as possible in the permit development process. However, dialogue with the permittee or the public at large should continue only as long as it proves useful. If the development process stalls or the interested parties reach an impasse over an issue, the permit writer should proceed directly to permit issuance. If the discharger believes that the permit writer's position is

unreasonable, it may, upon permit issuance, seek reconsideration through an administrative or judicial appeal.

If the Control Authority decides to provide public notice of and opportunity to comment a draft permit, the Control Authority should provide such a notice and opportunity for comment for all draft permits. This will avoid any appearance of arbitrary behavior on the Control Authority's part. The Control Authority might want to meet with the Industrial User and interested citizens before drafting the permit or wait until a draft permit is available for discussion. Alternatively, the Control Authority might choose to distribute copies of a completed draft permit and request comments in writing. A subsequent meeting can be arranged to discuss the comments, if warranted.

If comments are received on the draft permit, the Control Authority should review them and respond in writing, either on an individual basis to each commenter or for all commenters in a single *Response to Comment* document issued at the same time as the final permit. The Control Authority should keep a record of all public meetings, comments received, and telephone conversations to document how the permit was developed and to substantiate that proper procedures were followed. Lack of documentation during the permit development and issuance processes, such as undocumented meetings or undocumented verbal communications with the Industrial User or any other interested party, could create the appearance of undue influence and unequal access. Therefore, the Control Authority should avoid such practices.

Even where a Control Authority chooses not to involve the general public in its permit issuance process, it must still develop procedures to respond to individual requests to be notified of permitting activities. EPA regulations require Control Authorities to provide individual notice and opportunity to comment to persons or groups who request notification of local limits development [40 CFR 403.5(c)(3)]. Consequently, Control Authorities are expected to, at a minimum, maintain a mailing list of interested persons and provide them with notice of local limit development.

2.9 ISSUING THE FINAL PERMIT

After the public participation requirements, if any, are satisfied, the Control Authority revises the draft permit as necessary and proceeds to issue the final permit to the Industrial User. A transmittal letter accompanying the permit should summarize its contents. For example, the cover letter should contain the permit's effective and expiration dates, its enforceability, and any applicable procedures for appealing the permit conditions. To ensure that the Industrial User receives the permit, it is recommended that one of

the following delivery methods be followed: hand delivery or sending the permit by certified mail with return receipt requested.

In all cases, a signature should be obtained from the person accepting delivery of the permit. This signature should indicate only that the applicant has received the permit. There should *not* be a statement indicating that, by signing, the permittee agrees to comply with the terms and conditions of the permit. Such a statement could, depending on the circumstances, be misconstrued as changing the legal nature of the document from a permit to a contractual agreement; thereby affecting the interpretations and enforceability of the terms and conditions of the permit. The use of contracts or contractual agreements as a control mechanism does not provide a POTW with the requisite penalty authority for an approved program and are not an adequate control mechanism for POTWs with an approved program. A control mechanism signed by the permittee may be deemed a contract and thus lose its effectiveness as a control mechanism [53 FR 40574-40577; October 17, 1988].

Although each Control Authority will have its own set of procedures, the basic procedure for permit issuance will usually be the same. Figure 2-1 shows this basic permitting process.

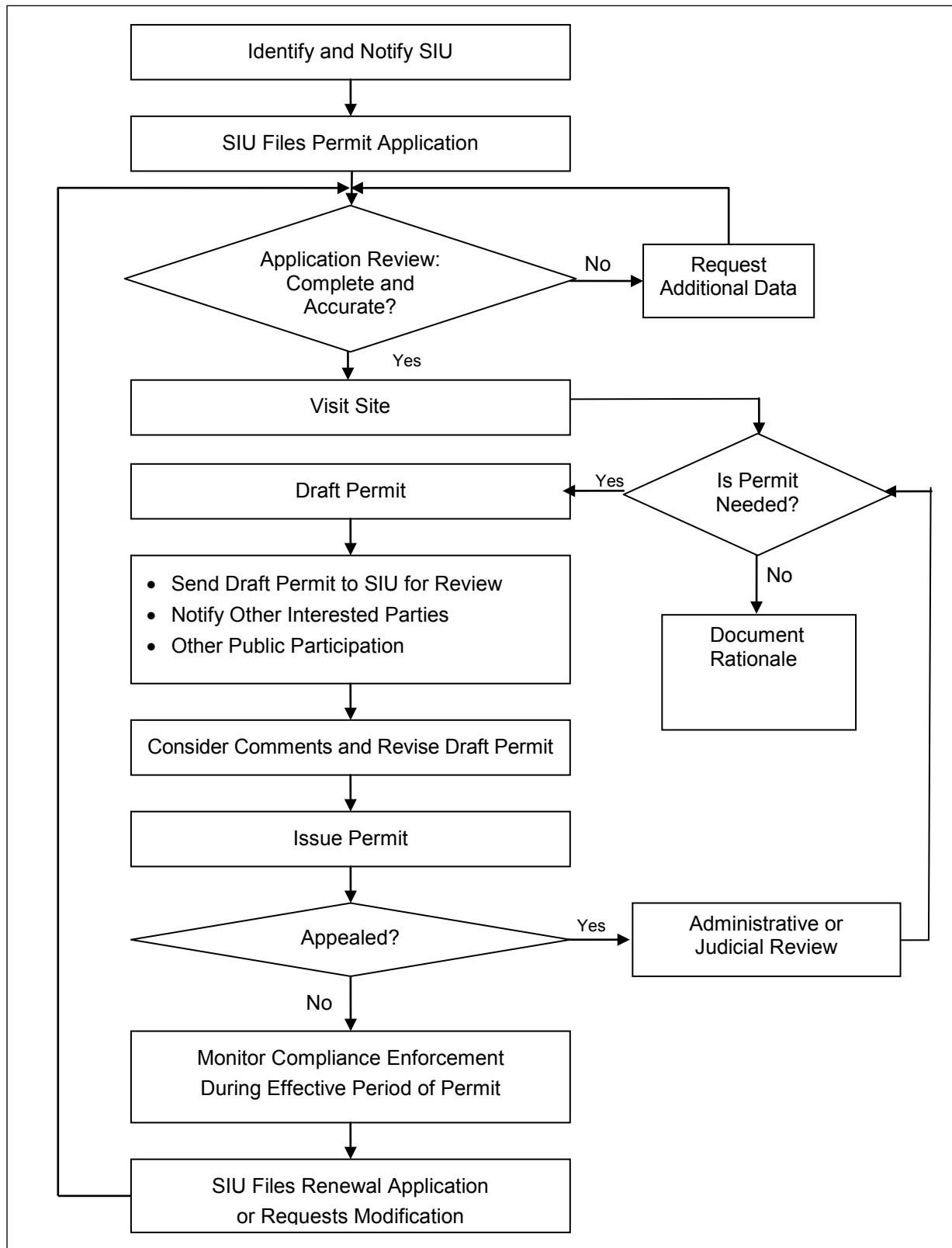


FIGURE 2-1. COMMON ELEMENTS OF AN INDIVIDUAL PERMIT ISSUANCE PROCESS

2.10 PERMIT APPEALS

Once the final permit is issued, Industrial Users should have the right to challenge or appeal specific provisions of the permit that they believe are contrary to law or an unreasonable exercise of the Control Authority's discretion under that law. The appeal period specified in the local legal authority should be clearly identified in the letter transmitting the final permit (see Appendix E) together with a brief description of the procedures the permittee must follow to file an appeal. The most effective permit programs provide that once the limited period for administrative or judicial appeals has passed, the permittee may not challenge the legality or appropriateness of the permit terms. Thus, the permittee may not (in an enforcement proceeding) raise issues that could have been raised in a permit appeal.

The Control Authority should establish, through its legal authority, an administrative forum where interested parties may request reconsideration of specific permit conditions. An administrative appeal process may allow legitimate errors to be corrected without expending the resource requirements of a judicial proceeding.

The Control Authority should consider the factors listed below when developing an administrative appeal mechanism.

- Requests for reconsideration should be in writing and include supporting reasons for reconsidering the permit conditions.
- Requests for reconsideration should be made within a defined period as specified by state law or the POTW's legal authority. After that time, the right of reconsideration—by the Control Authority or by a court of law—is considered waived.
- Reconsideration requests should be evaluated by someone other than the person drafting and issuing the final permit. For example, if the Control Authority has a board of directors or a director who was not directly involved in permit development, the board or such a director should consider the appeal.
- The appeal may be considered on the basis of written submissions only or may also provide for a hearing before the board or director.
- The request for reconsideration should not result in an automatic stay of the final permit conditions. However, if the request is granted, a stay might be considered appropriate at the discretion of the board or the director.

The legal authority should also provide the permittee with a limited time to bring a judicial appeal if the administrative appeal is not successful, after which the right to such an appeal is not authorized. The permit is then final and effective.

2.11 PERMIT REISSUANCE

The Control Authority should consider conditioning the continuation of an expiring permit. The Control Authority should require the existing permittee to submit a complete application with updated information in a timely manner in order to continue its authorization to discharge. If a permit application is used to renew the user's current permit, the permittee should submit the application with adequate lead time for the Control Authority to issue a new permit before the existing permit's expiration. If the Control Authority does not require an existing permittee to submit an application for permit renewal, the Control Authority could obtain the necessary information for the reissuance of a permit by reviewing inspection reports, historical effluent and flow data, and the permittee's current processes and treatment system. During permit reissuance, the Control Authority should review any requests by an Industrial User for any of the following: alternative monitoring, reporting, or classification. Ideally, the permit issuance process should take no more than 2 months to complete for any user. Therefore, EPA recommends that permittees submit applications for reissuance at least 90 days before expiration of the existing permit. To lessen the administrative burden on the Control Authority and to provide additional time to review the permit applications, EPA recommends that permits be issued with staggered expiration dates.

2.12 CONTINUING PERMITS BEYOND THEIR EXPIRATION DATE

As discussed above, a Control Authority might wish to obtain the legal authority or include other authorizing provision as allowed by state law to extend a permit's expiration. This provision should be applicable if the permittee has filed a timely application for permit reissuance but the Control Authority, through no fault on the part of the Industrial User, has not reissued the permit at the time of expiration. In such cases, the Control Authority should require that existing permit conditions remain in effect until the new permit is issued. This is important because the ordinance will typically forbid discharge without a valid permit. Thus, an Industrial User, through no fault of its own, could be forced to either cease operations or to continue discharging in violation of the ordinance. Also, in locations where there is no prohibition on Industrial User discharges without a permit, the user would not specifically be required to continue to follow the prescribed permit conditions of a lapsed permit pending Control Authority reissuance of the permit. *However*, EPA does not expect permits to be routinely continued beyond their

expiration dates, and Control Authorities should use this stopgap measure only in unusual situations. This procedure should not be used in lieu of maintaining a sufficient permitting staff or reissuing permits in a timely manner. Furthermore, the length of time a permit is continued should be kept as brief as possible.

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CHAPTER 3. LEGAL AUTHORITY FOR A PERMIT PROGRAM

The legal authority of a POTW or other local Control Authority to administer a permit program is derived from state law and local ordinance. Although this chapter describes the legal authority and procedures required for a POTW to implement an effective permit program, a state acting as the Control Authority must have similar legal authorities and procedures in place. State law will determine what authorities are available to the Control Authority and, thus, the Control Authority must be aware of the laws when developing or seeking modifications to its local legal authority. The local legal authority (which constitutes the Control Authority's exercise of the authority conferred by state law) must describe the permit program in sufficient detail so that Industrial Users and permit writers will know the procedures, expectations, and liabilities associated with the program. The Control Authority should request its attorney to assist in reviewing the legal authority to ensure that it provides adequate authority and that the legal authority does not create any unnecessary procedural or institutional obstacles that might hinder the permit program. If the legal authority must be modified to establish a permit program, the Control Authority should bear in mind that such modifications are considered a substantial modification requiring approval by the Approval Authority (EPA or state) in accordance with the procedure at 40 CFR 403.18.

Subsequent chapters of this manual will address the application and permit writing processes. This chapter considers the legal authority necessary to implement and enforce a permit.

3.1 LEGAL AUTHORITY

Under general principles of administrative law, permit applicants and other interested parties typically may challenge the Control Authority's permit decisions. Such challenges may include issues related to the authority of the Control Authority for conditioning and issuing the permit. Therefore, the Control Authority must ensure that it has the requisite legal authority to impose Pretreatment Standards and Requirements in Industrial User permits and control mechanisms and that it exercises its authority in a nonarbitrary manner. Assuming that state law authorizes Control Authorities to issue and enforce permits, the local ordinance must clearly provide the Control Authority with the following authorities [40 CFR 403.8(f)(1)(iii)]:

- Authority to regulate all Industrial Users contributing wastewater to the POTW
- Authority to require and issue Industrial User permits, orders, or other control mechanisms, including

- Authority to require Industrial Users to submit all data that the Control Authority deems relevant to permit decisions and provisions for public access to data
 - Authority to enter, inspect, and sample to verify information supplied by the Industrial User as well as to assess the Industrial User's compliance status
 - Authority to incorporate local limits, including BMPs (if applicable)
 - Authority to incorporate federal and state Pretreatment Standards and Requirements
 - Authority to require self-monitoring, record keeping, and reporting by permittee
 - Authority to develop other appropriate permit conditions
- Authority to enforce sewer use ordinance and discharge permit violations
 - Authority to require the development of a slug discharge control plan

Each of these authorities is discussed briefly below. EPA's *Model Sewer Use Ordinance* contains sample sewer use ordinance provisions addressing permit issuance and enforcement.

3.1.1 Authority Over All Industrial Users Contributing to the POTW

A Control Authority must be able to impose and enforce applicable Pretreatment Standards and Requirements on every nondomestic user contributing wastewater to its collection system. Therefore, it is necessary that the Control Authority's sewer use ordinance provides it with the requisite authority to issue control mechanisms, conduct compliance monitoring activities, and, when warranted, take appropriate enforcement action in response to noncompliance by Industrial Users within its boundaries. However, many Control Authorities serve Industrial Users beyond their political boundaries (e.g., beyond a city's limits or county line) and the legal authority to implement the Pretreatment Program in these *multijurisdictional* areas might be uncertain. Such circumstances typically require the Control Authority to take additional measures to ensure its regulatory authority throughout its service area. Control Authorities should consult their attorneys for approaches under state and local laws to any multijurisdictional problems. For additional information regarding multijurisdictional agreements, refer to the *Multijurisdictional Pretreatment Programs Guidance Manual*.

3.1.2 Authority to Require and Issue Individual Permits and General Control Mechanisms

3.1.2.1 Requiring Industrial Users to Obtain Permits

The legal authority for a permit system, whether in a local sewer ordinance or state law, must make it clear that Industrial Users covered by the permit program must obtain a permit or be subject to control under some general control mechanism. The permit should be obtained as a precondition to discharging wastewater into the sewer system. This requirement places the burden on the Industrial User to come forward and identify itself or risk an enforcement action for failing to obtain a permit. In addition, if the POTW plans to use general control mechanisms, the SIU requesting coverage under a general control mechanism must file a written request for coverage. EPA recommends that Control Authorities develop a permit boilerplate that includes all the requirements listed at 40 CFR 403.8(f)(2)(iii)(B).

Most Control Authority permit issuance does not involve public comment or public notice. EPA recommends that the Control Authority provide a draft permits to the Industrial User before issuance for review. When public comment or notice is required, the POTW may provide public notice of the draft permit or hold a public hearing.

3.1.2.2 Submitting Data

The legal authority should authorize the Control Authority to require the Industrial User to submit information on its facility, processes, raw materials, flows, pollutant discharge, storage areas, production, and other environmental permits held. Typically, because each Industrial User is unique, the Control Authority should also be able to require that the user submit additional information as might be necessary to evaluate its wastewater discharge and spill potential. CIUs, are however, required to submit baseline monitoring reports (BMRs) [40 CFR 403.12(b)]. Some POTWs use the BMRs from CIUs as applications. The legal authority must ensure that information submitted to the Control Authority that meets EPA's definition of *effluent data* under 40 CFR 2.302 will be available to the public without restriction [40 CFR 403.14].

In addition to collecting the necessary data through an application, the Control Authority could also obtain this data through a site visit to the facility in question.

If an SIU is requesting coverage under a general control mechanism, the Control Authority must ensure that the Industrial User identifies its contact information, production processes, the types of waste generated, and the monitoring location or locations at which all regulated wastewaters will be monitored.

The request for coverage should also include a finding that the SIU properly falls within the category of facilities covered by the general control mechanism.

In addition, the user's request for coverage should include an indication of whether the user is requesting a monitoring waiver for pollutants not present. SIUs that are requesting monitoring waivers for pollutants neither present nor expected to be present might still qualify for coverage under a general control mechanism. Control Authorities will need to determine whether such facilities could still meet the required criteria for being considered substantially similar. EPA specifies that the monitoring waiver is effective in the general control mechanism only after the SIU obtains written approval from the POTW that the monitoring waiver request has been approved.

3.1.2.3 Entering and Inspecting

EPA regulations require the Control Authority to have the authority to enter and inspect Industrial Users' facilities. This authority must be at least as extensive as EPA's own broad authority under section 308 of the CWA. At a *minimum*, such entry and inspection authorities must allow the Control Authority's authorized representative(s) to, (1) have a right of entry to, upon, or through any premises in which an effluent source is located or in which records required to be maintained by the permittee are located, and (2) have access to and copy any records, inspect any monitoring equipment or methods (required of the permittee), and sample any effluent that the owner or operator of the source is generating [40 CFR 403.8(f)(1)(v)].

3.1.2.4 Imposing Local Limits (including BMPs)

The Control Authority is obligated to develop and enforce local limits or BMPs necessary to implement and enforce the general and specific prohibitions [40 CFR 403.5]. The legal authority must state that such local limits or BMPs or both may be imposed on Industrial Users directly through the legal authority, through Industrial User permits, and through additional control mechanisms that the Control Authority intends to use as part of its pretreatment program.

3.1.2.5 Imposing Federal and State Requirements

Control Authorities are responsible for enforcing federal and state Pretreatment Standards and Requirements as well as local limits. The legal authority must specifically require compliance with the general and specific prohibitions [40 CFR 403.5] and any other requirements mandated under state law. The Control Authority must have the authority to enforce all these requirements and to impose and

enforce them through Industrial User permits [40 CFR 403.8(f)(1)(ii)]. Moreover, the Control Authority must ensure that the legal authority does not provide for any variance or adjustment of the requirements other than those authorized under applicable state or federal law.

3.1.2.6 Requiring Industrial Users to Self-Monitor, Keep Records, and Report

Federal regulations require certain classifications of Industrial Users to conduct periodic self-monitoring, maintain sampling records, routinely report on their compliance status, and disclose any changing conditions or planned alterations at their facilities [40 CFR 403.12]. The Control Authority must have the legal authority to impose and enforce such requirements in Industrial User permits. In addition, the ordinance should authorize the Control Authority to impose and enforce those or similar obligations on other Industrial Users. Furthermore, for any user determined by the Control Authority to be an NSCIU, the Control Authority must require an annual certification requirement in accordance with 40 CFR 403.12(q).

3.1.2.7 Imposing Other Conditions based on State or Local Requirements

In many instances, the Control Authority will have developed other local requirements or conditions applicable to Industrial User discharges. These conditions are in addition to those required by the National Pretreatment Program. These conditions might include such things as user fees, a cross-connection prohibition, backflow prevention fees, or surcharge fees for excessive Industrial User loading of compatible pollutants above surcharge threshold values (i.e., Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), ammonia, oil and grease). Surcharge threshold values are not considered maximum ceiling concentration effluent limits. If a discharger exceeds a surcharge threshold value, the discharger is not in violation of an effluent limit. Surcharge fees are typically established on the basis of the POTWs' cost for treating the excessive compatible pollutant loadings. Therefore, the Control Authority should ensure that any surcharge threshold values are clearly specified as such and are not characterized as enforceable maximum discharge limits. Because surcharge threshold values are not the same as effluent limits, the permit writer should not include surcharge threshold values in the same table or section as effluent limits. Although such conditions might not directly relate to controlling interference or pass through, they are nonetheless Industrial User requirements and may be included as permit conditions. For this reason, the Control Authority must have the legal authority to impose such conditions in Industrial User permits as the Control Authority deems necessary or desirable. In addition, the permit and its fact sheet should clearly state the authority by which the condition is being imposed.

3.1.3 Authority to Enforce Permit Violations

Few legal authorities explicitly mandate all the specific pretreatment requirements that a Control Authority may be authorized to impose through a permit on an Industrial User. In other words, they leave many details regarding the contents and issuance of a permit to the discretion of the Control Authority, in general, and the permit writer in particular. While it isn't necessary for the legal authority to describe in detail the specific requirements for each Industrial User, the individual permit will contain the applicable, typically more detailed and enforceable requirements applicable to the specific individual Industrial User. The legal authority should specify the enforcement response alternatives available to the Control Authority including injunctive relief, civil and criminal penalties, and service termination.

PART II

Permit Writing Procedures

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CHAPTER 4. PERMIT APPLICATIONS

After the Control Authority has established its permitting procedures and legal authority (as discussed in Chapters 2 and 3), permit preparation can begin in earnest. The initial step in this process is to obtain and review Industrial User data from the permit application and all other pertinent background information. The permit writer must evaluate and verify the completeness and accuracy of the data because they are used as a basis for permitting decisions.

4.1 WHAT INFORMATION TO COLLECT AND HOW TO COLLECT IT

A permit application enables the Control Authority to obtain the information necessary to evaluate the quality and quantity of wastewater to be discharged and to determine what controls are necessary for the Control Authority to accept the wastewater. The Control Authority should have the legal authority to require an Industrial User to complete and file a permit application to receive a permit. In addition, Control Authority should consider requiring an existing permittee to submit an application with updated information for a reissued permit. The permit application serves as the formal request from the Industrial User to the Control Authority to connect or discharge to the sewer system.

The permit application format should be standardized so that all necessary information is requested but should also allow the applicant the leeway to include narrative information. The Industrial User should be required to provide manufacturing process flow and wastewater characteristics, and information regarding any existing BMPs. Other information, such as number of employees, list of chemicals used or stored, and plumbing schematics, is also vital to the permit writer. The number of employees can indicate the estimated volume of sanitary flow, and the list of chemicals used by the facility can indicate potential pollutants present in the wastestream. This information can lead to a better understanding of the facility's operations, which, in turn, enables the permit writer to evaluate the Industrial User's discharge comprehensively and to develop adequate and appropriate permit conditions. An example of an application form is in Appendix C.

If the Control Authority does not require an Industrial User to complete a permit application to receive a permit, the Control Authority could compile the necessary information to draft a permit by reviewing the Industrial User's BMR (if the user is a CIU), reviewing historical effluent data, or conducting a site inspection of the user's facility.

4.2 APPLICATION REVIEW PROCESS

After receiving the completed application, the review process begins. First, the Control Authority should review the application for completeness and accuracy. Because the draft permit is based on the information in the application, it is imperative that the permit writer use all means possible, including inspecting the facility (for more information regarding facility inspections, see Section 4.2.4), to verify the completeness and accuracy of the application.

4.2.1 *Completeness*

At a minimum, the application form should have all applicable spaces filled in and should be signed and dated by the authorized Industrial User representative with the appropriate signatory certification. Instructions provided to the Industrial User on how to complete the application should state that all items must be completed and that the term *not applicable* should be used to show that the item was considered but was not pertinent to the facility. If blanks do appear on the submitted application form, the permit writer should obtain a response to the items before issuing a permit. In some cases, obtaining a response can be handled over the telephone, with the phone conversation documented in writing. However, the permit writer may choose to meet the responsible party at the facility to explain and assist in completing the missing application information and to clarify questions that might not have been understood. The most reliable method is to obtain the response in writing by returning a copy of the application to the applicant for completion. Such a method has the advantage of requiring the permit applicant to actually fill in the blanks in a copy of the originally submitted application, thereby allowing greater clarity as to who provided the information and who is responsible for any inaccuracies or distortions of fact. The Industrial User should be required to initial and date any changes. The Control Authority should also have the Industrial User resubmit the revised application with a new signatory certification. Additionally, the permit writer should conduct a facility inspection to determine whether the information on the application is complete. If changes or corrections to any application are extensive, the Control Authority should exercise its information gathering authority to request a revised, complete application instead of an incomplete application that is later augmented with multiple attachments.

When reviewing the application for completeness, the permit writer should make sure that three items—which are often overlooked by applicants—are included in the application: (1) the facility's sewer piping layout and process diagrams; (2) effluent data (new facilities would not have effluent data but could provide effluent data from another facility using the same production process, chemicals, and treatment process), and (3) a list of raw materials used at the facility.

In some cases, such as where significant dilution is thought to occur, data on the characteristics of internal wastestreams, particularly treatment unit effluents, might be needed to assess the adequacy of existing pollution controls and the feasibility of achieving greater reductions of pollutants in the effluent. In addition, data on flows of internal wastestreams must be known if the permit writer is applying the CWF [40 CFR 403.6(e)]. Table 4-1 gives three examples of how to analyze permit applications to determine if

TABLE 4-1
EXAMPLES OF DEFICIENCIES COMMONLY FOUND IN PERMIT APPLICATIONS

Are required toxic organic pollutants listed?
Example: An application from an Industrial User subject to federal categorical metal-finishing regulations fails to list the presence or absence of any toxic organics.
Discussion: Industrial facilities subject to metal-finishing categorical standards are regulated for 111 toxic organics [40 CFR 433.11(e)]. To comply with the federal BMR requirements and the 90-day compliance report, the facility must monitor for those regulated toxic organics reasonably expected to be present, on the basis of a process engineering analysis of the raw materials used and the possibility of any toxic organics present at the facility coming into contact with water and wastewater sources. If no toxic organics are used or expected to be discharged, this should be so stated by the facility's authorized representative. The Control Authority must require the user to sample, analyze, and report on all toxic organic pollutants on the required reports. [Note: The permit writer must verify the toxic organic pollutant requirements with the specific categorical regulations.]
Are all expected pollutants listed?
Example: A job shop electroplater marks zinc and copper as "believed absent in the wastewater."
Discussion: If the facility discharges 10,000 gpd or more, zinc and copper are regulated by the electroplating categorical standards [40 CFR Part 413, Subpart A] and must be monitored even if they are not expected to be present in the discharge in significant quantities [40 CFR 403.12(b), (d), and (e)]. If the facility discharges less than 10,000 gpd, zinc and copper are not regulated and, therefore, are not required by federal regulations to be monitored; however, such pollutants could be present in trace amounts in proprietary chemicals or because the base material contains zinc or copper. A comprehensive test will determine whether any unexpected contaminants are present in significant quantities and will provide information on levels of pollutants that are known to be present. [Note: Even if the Control Authority has established the authority to waive sampling requirements for pollutants regulated by a categorical Pretreatment Standard, the waiver is not available for monitoring required for BMRs (40 CFR 403.12(b) or the 90-day compliance report (40 CFR 403.12(d)].
Has the Industrial User evaluated all pollutants?
Example: A metal finisher marks many pollutants as <i>Unknown</i> presence (other are listed as not present or present). What should the permit write do?
Discussion: The Industrial User should be required to monitor and report for all the pollutants being reported as <i>Unknown</i> in the discharge. This monitoring requirement could be to conduct sampling and analysis as a one-time sampling event during the duration of the permit, or as frequent as the permit writer deems necessary. This will provide the permit writer some basic information to document permit decisions such as modifications to the permit, including additional permit limits, or including additional monitoring requirements.

they are complete. Pollutant data on the final effluent might not always be adequate for complex facilities where internal wastestreams can be diluted by large volumes of cooling water before the sampling point. Waste characterization (through sampling and analysis) of individual wastestreams might be necessary. Where an Industrial User discloses that a pollutant is present in the effluent, the permit writer should include a monitoring requirement for that pollutant. A review of all raw materials will allow the permit writer to decide what pollutants warrant limits or monitoring requirements or both. The permit writer should not hesitate to require any supplementary information (such as more detailed production information or monitoring data) needed to develop the permit.

Finally, the application should be signed by a responsible corporate officer of the Industrial User because submitting false information is subject to significant penalties under federal law. EPA regulations [40 CFR 403.12(l)] require that reports from CIUs be signed by one of the following persons:

- a) By a responsible corporate officer, if the Industrial User submitting the reports, required by 40 CFR 403.12(b), (d), and (e), is a corporation. For the purposes of this paragraph, a responsible corporate officer means
 - (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principle business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions that govern the operation of 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.
- b) By a general partner or proprietor if the Industrial User submitting the reports, required by 40 CFR 403.12(b), (d), and (e), is a partnership or sole proprietorship, respectively.
- c) By a duly authorized representative of the individual designated in 40 CFR 403.12(l)(1) or 403.12(l)(2) if

- (i) The authorization is made in writing by the individual described in 40 CFR 403.12(l)(1) or 403.12(l)(2);
 - (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and
 - (iii) The written authorization is submitted to the Control Authority.
- d) If an authorization under 40 CFR 403.12(l)(3) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, the Industrial User must submit a new authorization satisfying the requirements of 40 CFR 403.12(l)(3) to the Control Authority before or together with, any reports to be signed by an authorized representative.

4.2.2 Accuracy

A permit application must be accurate. In other words, not only should the application be complete and contain all the necessary information, but it must also be correct. While it might be difficult to detect certain inaccuracies, a number of common mistakes can be readily detected. When mistakes are detected, the permittee must correct them. The permit writer should follow the same procedures to correct inaccurate information as were used to obtain missing information. The examples in Table 4-2 illustrate the type of review that the permit writer must conduct.

In verifying the Industrial User's information, particular attention should be given to the following:

- Information on the use, production, and discharge of toxic substances
- Information on all wastestreams (including schematic flow diagram(s) and waste characterization of individual wastestreams)

**TABLE 4-2
COMMON INACCURACIES IN PERMIT APPLICATIONS**

Are the reported values consistent with the existing permit, previous application, and monitoring data?
<p>Example: The monitoring data from the previous permit show an average discharge of 38 pounds per day for oil and grease. The new application reports an average of 3.3 pounds per day.</p> <p>Discussion: There might be a problem in calculation here. It could be simply a shift in the decimal point, or it could involve some other type of error. It could also represent a significant change in production techniques or treatment efficiencies.</p>
Are analytical detection limits sufficient to detect the presence of pollutants?
<p>Example: An Industrial User subject to the metal-finishing categorical Pretreatment Standards reports that methylene chloride was not detected at the detection level of 0.1 mg/L.</p> <p>Discussion: The Total Toxic Organics (TTOs) standard is the summation of all quantifiable values greater than 0.01 mg/L of the specific toxic organics listed in the regulation. A detection limit of 0.1 mg/L would not reveal the presence of methylene chloride at concentrations between 0.01 mg/L and 0.1 mg/L. The permit writer should verify that the best approved analytical procedures were used to verify the presence or absence of methylene chloride. If not, further testing using approved procedures should be required.</p>
Do the concentration, mass, and flow values correspond?
<p>Example: Suppose an Industrial User reports a maximum daily flow of 0.12 mgd, a daily TSS concentration of 23 mg/L, and a maximum daily mass discharge of 2.3 pounds per day.</p> <p>Discussion: There appears to be a mathematical error because the maximum daily flow and concentration yield a maximum daily discharge of 23 pounds per day. The permit writer should investigate this apparent error.</p>

Accurate information on the use or production of toxic or nonconventional pollutants at a facility and adequate sampling data on such pollutants in the facility's effluent are essential for preparing appropriate permit limits. Industrial Users should provide a comprehensive list of toxic substances used, produced (as products, by-products, or intermediates), and stored and identify the toxic substances known or suspected to be present in the wastestream. If the Industrial User lists toxic substances but does not indicate their potential presence in the wastestream, an explanation for their absence from the wastestream should be provided. Specific constituents of trade name products or compounds should be obtained from manufacturers. Facility inspections should be conducted to verify this information by inspecting all storage areas and reviewing material safety data sheets.

The permit writer should also verify schematic diagrams of facility operations and internal wastewater streams by inspecting the facility. If the facility is subject to categorical Pretreatment Standards, the permit writer should pay attention to identifying which wastestreams are regulated by the categorical

standards, which wastestreams are not, and where any wastestreams might combine. Proper classification of the various wastestreams and accurate flow data on the individual wastestreams are critical to calculating correct effluent limits.

Facility inspections may include dye testing as a method of verifying piping diagrams or identifying where piping diagrams do not exist. Developing a water balance (as discussed in Table 4-3) using the water and wastewater flow data provided by the Industrial User can determine whether all wastestreams have been accounted for and whether flow data are accurate. If discrepancies exist, the Control Authority should collect actual flow measurements to gather more accurate data.

**TABLE 4-3
VERIFICATION OF FLOW DATA USING WATER BALANCE**

Example: An Industrial User has estimated a wastestream flow of 50,000 gpd using water usage records. However, a review of historical water usage records and an old permit application indicates wastewater flows ranged from 100,000 to 150,000 gpd. The facility had not instituted any water-reduction measures, significantly changed its process operations, or decreased its number of employees.

Discussion: An inspection of the facility revealed two separate water meters (one for sanitary and one for process water); the Industrial User had overlooked the sanitary meter. Further, the process water meter was found to be defective. Subsequent flow monitoring of the total wastestream recorded a flow of 125,000 gpd. A new water meter was installed and concurrent wastestream flow monitoring and water meter readings resulted in the following water balances:

- **Water In** (based on both water meter readings): 148,000 gpd (131,000 gpd process line and 17,000 gpd sanitary line)
- **Water Out** (based on wastestream flow monitoring): 125,000 gpd total wastestream discharged to sewer system. Evaporative and consumption losses were estimated at 23,000 gpd (15 percent of total water usage).

4.2.3 Background Information Review

To help evaluate the completeness and accuracy of the permit application, the permit writer should consider any additional background information on the facility that might be relevant. Much of this information might already be available in the Control Authority's Industrial User files. Pertinent background information to consider includes the following:

- **Current permit and rationale for the current permit**—The permit writer should be aware of the parameters regulated, the basis for setting effluent limits (i.e., any change in processes or categorical wastestreams), and any BMPs required of the discharger. This information will alert the permit writer to pollutants previously thought to be of concern and the monitoring requirements deemed appropriate. In addition to reviewing the Industrial User background

information, the permit writer should consider whether changes in the treatment plant's operation, its NPDES permit conditions and its sludge disposal practices and limitations could affect the industry's permit conditions. If the conditions under which specific discharges were permitted have not changed since the last permit application, there is little reason for drastic changes to the conditions for that discharge, assuming the previous permit was developed properly. Exceptions to this include cases where a record of problems or noncompliance exists at the facility, as discussed below.

- **Old permit application, BMR, and industrial waste surveys**—Information in such documents can be used (1) to establish past operating practices and conditions; (2) as a baseline for evaluating the new application; and (3) to identify changes.
- **Compliance inspection reports, sampling data, and self-monitoring reports**—Such reports can provide the permit writer with information regarding possible causes for any permit violations, indicate how well wastewater treatment units are operated, and provide insight as to the discharger's commitment to environmental compliance. Information gathered from the reports such as evidence of spills or poor operation and maintenance of a treatment system can also provide a basis for the requirement of Industrial User management practices as a permit condition. If the reports reveal any changes in the facility's operations such differences should be noted and verified. If the changes in the facility's operations are not noted in the latest application, any discrepancies should be resolved to the permit writer's satisfaction before a permit is issued.

Review and evaluation of sampling data are important because the data can indicate how consistently the permit limits have been met. This information can be relevant in establishing monitoring frequencies required in the new permit. Changes in monitoring data or compliance can also indicate possible changes at the facility.

The permit writer must review sampling data and document such an evaluation to provide a sampling waiver, to determine qualifications under a general control mechanism, or to reclassify the facility as an NSCIU or middle-tier categorical industrial user (MTCIU).

- **Correspondence concerning compliance or enforcement actions**—This information can alert the permit writer to the occurrence and resolution of compliance problems and can be used to help the permit writer determine monitoring frequencies and special conditions.

The permit writer can obtain additional information on the industrial processes and pollutants that might be present by reviewing national categorical pretreatment regulations, related development documents, reference text books on specific industry categories, and information from other environmental permit programs such as the Resource Conservation and Recovery Act (RCRA) and the Clean Air Act. As needed, the permit writer should request supplemental information from various state agencies, EPA Regional offices, EPA's Office of Enforcement and Compliance Assurance (Compliance Assistance and Sector Programs Division), and the applicant.

4.2.4 Facility Inspection

As mentioned earlier, EPA recommends that the permit writer conduct a facility inspection (including taking pictures) to verify application information and to gain an understanding of the Industrial User's facilities. The inspection should encompass a review of the following:

- **Facility information**—This review will ensure that the facility information such as the facility address (physical location versus mailing location) and the location of the sampling point is correct in the permit and permit files.
- **Production processes**—This will help the permit writer identify the following:
 - Applicable categorical Pretreatment Standards
 - Toxic or hazardous substances that might be present in raw materials, products, and by-products that have the potential to be present in the industry's discharge
 - Water uses and resulting wastewater streams
 - Existing in-process pollution controls
 - Potential for spills and leaks

From such information, the permit writer can select pollutants to be limited or require development of additional in-process controls.

- **Sewer layout of the plant**—If a sewer plan exists, the permit writer should review the plan thoroughly to determine the course and destination of each sewer line. He or she should identify the exact source of and the point at which each wastestream enters the sewer. The permit writer should also delineate the existing monitoring point or any potential location for monitoring. Where sewer plans do not exist, he or she should perform smoke or dye testing to locate all points of discharge to the sewer system. This information will be used to determine the appropriate

sampling points, to ensure that all points of discharge to the sewer system will be identified in the permit, and to evaluate the need for application of the CWF.

- ***Wastewater treatment facilities, including treatment performance and operation and maintenance practices***—Such information can be used to evaluate the adequacy of existing treatment, to assess the feasibility of improvements, and to evaluate performance data.
- ***Types of batch discharges that occur at the facility***—This information could affect the design of the monitoring requirements. Cleanup operations usually result in batch discharges of washdown water. Permit writers should obtain information about cleanup times and water volumes.
- ***Raw material and product storage and loading areas, sewage sludge storage and disposal areas, hazardous waste management facilities (if applicable) including on-site disposal areas and all process areas, and the proximity of such areas to sewer discharge points***—This review will help to identify potential pollutants and potential or known problems with spills or leaks. The information is then used to determine the need for additional controls by establishing specific Industrial User BMPs (i.e., slug discharge control plans, toxic organic management plans, and good housekeeping practices).
- ***Sampling points, sampling methods, and analytical techniques***—This information is necessary to determine appropriate limits to apply at different locations, whether internal monitoring points should be established, and to evaluate the quality of both the Control Authority's and the Industrial User's sampling data.

An adequate inspection of a facility could require a full day or more to conduct. Complex plants with several treatment systems, numerous sewer connections and associated waste delivery piping, and extensive ancillary activities might require more than one day to inspect. For guidance on the performance of inspections, see the *NPDES Compliance Inspection Manual* and EPA's *Industrial User Inspection and Sampling Manual for POTWs*.

4.3 PUBLIC ACCESS TO INFORMATION

Certain information collected through a permit application form and industrial monitoring reports must be made available to the general public upon request [40 CFR 403.14(b)]. The following information is defined as *effluent data* at 40 CFR Part 2 of EPA's regulations and must always be available to the public:

- General description of the location and nature of the source to the extent necessary to identify the source and distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source)
- Information necessary to determine the identity, amount, frequency, concentration, temperature, or other characteristics (to the extent related to water quality) of the pollutants that, under an applicable standard or limitation, the source was authorized to discharge (including, to the extent necessary for such purpose, a description of the manner or rate of operation of the source)
- Information necessary to determine the identity, amount, frequency, concentration, temperature, or other characteristics (to the extent related to water quality) of any pollutant that has been discharged
- Production data at facilities subject to production-based categorical pretreatment standards.
[Reference: RSR Corp. v. Browner, 1997 U.S. Appeals LEXIS 5523 (2nd Cir. Mar. 26, 1997)]

While the effluent data must be made available to the public, other data submitted by Industrial Users may be claimed *confidential* and withheld from public scrutiny. The Control Authority, however, must release information submitted under a claim of confidentiality to the Approval Authority and EPA (if different) whenever requested to do so. To guarantee that effluent data remain available for public review, the ordinance should specifically state that effluent data [as defined in 40 CFR 2.302(a)(2)] will not be considered confidential under any circumstances. The ordinance may also provide that proprietary information or trade secrets will be entitled to consideration by the Control Authority for possible confidential treatment (provided that such information is not *effluent data*) if the Industrial User stamps *Confidential Business Information* over all parts for which protection is sought. When confidentiality is requested, the Control Authority may make an immediate determination as to whether to grant the request or defer making a determination until the Control Authority receives a request to provide the information to the public.

If the Control Authority determines, when it first receives the request for confidentiality, that the information is not entitled to confidential treatment, the Control Authority should notify the Industrial User verbally and then by written notice of the denial of confidentiality status. The written notice may be made by certified mail with return receipt requested, by personal delivery, or by other means that allow verification of receipt and the date of receipt. This written notice should provide an opportunity for the Industrial User to appeal the decision within 15 days.

If the Control Authority determines that the information is confidential (or if it is being treated as confidential pending a final determination), the Control Authority should separate the information from the rest of the permit file and keep it in *limited access* (lock and key) status. This will typically require creating a second file for each user that contains additional confidential materials. Access to the special information should be safeguarded, even against Control Authority employees who have no legitimate reason for access to such materials. If such information is turned over to EPA, the confidential information will receive such protection as is afforded by 40 CFR Part 2. All information that is not *specifically* identified as confidential (or that is later determined by the Control Authority not to be entitled to confidential treatment) should be available to the public upon request.

If the Control Authority defers the determination of confidentiality until public access to the information is requested, the Control Authority should notify the Industrial User of the request, inform the Industrial User of the preliminary determination, and provide an opportunity for the Industrial User to appeal. The Control Authority should allow a period of no less than 15 days for the Industrial User to respond. If the Industrial User does not respond, the Control Authority may release the information (if the information was not entitled to confidentiality) or deny the request to provide the information (if the information is considered confidential).

It is important that the Control Authority keep public information in an orderly and complete manner and protect against theft or destruction of valuable documents. Therefore, the Control Authority should develop a *request system* that will create a permanent record of the information requested and the person(s) handling and receiving the information. Such a system might function similarly to a checkout system at a public library and would enable the Control Authority to identify persons looking at the file if a portion of it was ever missing. In fact, the Control Authority should have photocopying services available on-site to prohibit files from being taken off the premises.

CHAPTER 5. PERMITTING CONSIDERATIONS

5.1 CONTENTS OF A PERMIT

Once complete and accurate information is obtained and verified, the next step in the Industrial User permit development process is for the Control Authority to draft the actual permit. At a minimum, the permit should consist of the following elements:

- Cover page (Chapter 6)
- Effluent limits (Chapter 7)
- Monitoring requirements (Chapter 8, Sections 8.1-8.5)
- Reporting requirements (Chapter 8, Section 8.6)
- Standard conditions (Chapter 9)
- Additional conditions where necessary to adequately regulate the discharge (Chapter 10)

Such elements are set out in a sample permit in Appendix E, and sample standard conditions are provided in Appendix F. Those appendices illustrate many of the concepts discussed in this chapter. Before the six elements are discussed in more detail, some general considerations need to be emphasized: the care that the permit writer should take in the structure and wording of the permit; common permitting errors or omissions to avoid; the flexibility of the permit; and the importance of documenting all permit decisions.

5.2 STRUCTURE AND WORDING

The structure and wording of a permit directly affect the Control Authority's ability to invoke its various enforcement options successfully. For this reason, the permit writer should follow three general rules:

- Use specific language
- Develop concise and complete discharge conditions and requirements
- Write as clearly and simply as possible (please refer to www.plainlanguage.gov for more information)

The permit writer should avoid vague, weak, or obtuse language that could undermine the permit's enforceability. The list below shows appropriate language to use in the permit.

To express	Use
is required to	must
is required not to, is not allowed	must not
has discretion to, is permitted to	may
is not permitted to	may not
ought to	should
future contingency	will

The permit writer should also avoid long and confusing requirements. However, the permit writer should not be so brief as to leave out vital specifics. A permit frequently acts as the principal notification to the Industrial User of its responsibilities for compliance. Therefore, permit requirements must be clear and simple to understand.

5.3 COMMON PERMITTING ERRORS AND OMISSIONS

The permit writer should keep in mind that any of the following errors and omissions in the permit might cause it to be susceptible to legal challenge, to fail to properly regulate the Industrial User, or to be misleading or confusing to the permittee:

- Failure to correctly calculate and apply effluent limitations from applicable Pretreatment Standards
- Failure to apply the most stringent limit (federal categorical Pretreatment Standard, state requirement, or local limit)
- Failure to regulate all discharge points
- Omission of standard conditions
- Failure to specify adequate monitoring or analytical requirements, including a failure to identify specific monitoring locations
- Use of ambiguous or inappropriate permit commands, such as *recommended*, *shall*, and *expected* rather than *may*, *may not*, *will*, *must*, *must not*, and *should*, (for appropriate use of these, see the list in section 5.2)

- Failure to incorporate specific citations to requirements contained in an ordinance or regulation, where the requirements are not otherwise set forth in the permit
- Failure to specify the signatory requirements for self-monitoring reports and other notification requirements
- Failure to account for any known seasonal changes or other predictable variations in the effluent

5.4 FLEXIBILITY

Specific conditions within each permit element should be tailored to the Industrial User for which the permit is intended. While it might be obvious that very dissimilar Industrial Users will need different permit conditions, even similar Industrial Users could need permit conditions tailored to site-specific discharge situations. Table 5-1 presents an example that illustrates the use of flexibility in the individual permit system, and Table 5-2 presents an example of when general control mechanisms could be used.

**TABLE 5-1
EXAMPLE OF FLEXIBILITY OF INDIVIDUAL PERMITS**

Company X, which manufactures product X, conducts metal-finishing operations including zinc plating, phosphate coating (using a zinc-phosphate solution), and painting. The company has a history of zinc violations and has a continuous discharge of 35,000 gpd.

Company Y manufactures product Y and, like Company X, conducts metal-finishing operations including zinc plating, phosphate coating, and painting. However, Company Y's operations are on a smaller scale. Plating is done only one or two days a week; the company has switched to an iron phosphate solution and recycles the phosphate solution and first rinse waters. The discharge is less than 3,000 gpd.

The Control Authority writes a permit for Company X that contains conditions that are based on the applicable metal-finishing categorical Pretreatment Standards. The permit also requires weekly monitoring for zinc and monitoring for the other metals six times per year. Company Y's permit, like Company X's, contains conditions that are based on applicable metal-finishing categorical Pretreatment Standards but requires only monthly monitoring for zinc (on a day when any batch discharges from the recycled phosphate solution and first rinse waters and plating operations occur) and a twice per year monitoring for all other metals regulated in the permit.

**TABLE 5-2
USING GENERAL CONTROL MECHANISMS**

Company X and Company Y have requested coverage under a general control mechanism. Company X is an industrial laundry that washes restaurant and hotel linens and floor mats. Company Y is also an industrial laundry, but it washes uniforms and towels. Both companies, however, have the same pollutants of concern: oil and grease, TSS, and BOD. The POTW has local limits for each of the pollutants of concern. In addition, the facilities use similar laundry practices, and both have sampling locations after treatment of wastes.

The POTW has submitted to the Approval Authority that it has the legal authority to issue general control mechanisms to substantially similar facilities and has already established policies and procedures for implementing general control mechanisms. Furthermore, the POTW has already established general control mechanism policies and procedures for laundry facilities.

The Control Authority determines that Company X and Company Y are substantially similar to the general control mechanism policies established for laundry facilities. Therefore, the Control Authority authorizes both facilities to discharge under a general control mechanism with the same discharge conditions.

Certain permit conditions are not flexible and cannot be modified. For example, the permit writer cannot modify categorical Pretreatment Standards and Requirements or the general and specific prohibitions in 40 CFR 403.5. The following are federal requirements that must be imposed on Industrial Users where they apply:

- Those conditions based on federal Pretreatment Standards and Requirements, including any BMP requirements
- Use of the CWF or flow-weighted averaging formula to derive appropriate limits for CIUs where applicable
- Requirement to follow analytical methods in 40 CFR Part 136 or other EPA-approved methods for wastewater analyses

The permit writer cannot modify any Industrial User permit or general control mechanism conditions mandated by state law or local ordinance, such as the following:

- Those conditions based on state Pretreatment Standards and Requirements (unless otherwise specified)
- Standard conditions adopted by the Control Authority
- The Control Authority's ability to modify or terminate the permit during its effective period
- The extent of the permittee's enforcement liability if noncompliance occurs

Flexibility is provided, however, in the drafting process allowing the permit writer to analyze comments and modify portions of the permit. Situations (depending on legal authority) that could result in modified permit conditions include the following:

- Wastewater flow rate [Note: Modifications to the wastewater flow rate must not exceed the flow used in the development of the approved maximum allowable industrial loading. In addition, if an Industrial User is classified as an MTCIU, its flow rate modification must not exceed the following:
 - 0.01 percent of the design dry-weather hydraulic capacity of the POTW, or 5,000 gpd, whichever is smaller,
 - 0.01 percent of the design dry-weather organic capacity¹ of the POTW; and
 - 0.01 percent of the maximum allowable headworks loading (MAHL) for any pollutant regulated by the applicable categorical Pretreatment Standard for which approved local limits were developed by the POTW in accordance with 40 CFR 403.5(c).]
- Production rates
- Pollutants of concern other than those addressed by Federal, State, or local regulations
- Monitoring location (for more details, see Section 8.1)
- Monitoring frequency (for more details, see Chapter 8)
- Special conditions
- Effective period (a maximum of 5 years)

5.5 DOCUMENTING PERMIT DECISIONS

Throughout the permit drafting process, the permit writer should carefully and thoroughly document each step for several reasons. First, it will help the permit writer develop the permit thoroughly and logically. Second, it will facilitate defending any challenges that the permit terms and conditions were developed arbitrarily or capriciously. Third, it will provide the required documentation in the permit record of any relief from otherwise applicable requirements (i.e., pollutants not expected to be present, equivalent limits, decisions on general control mechanisms, decisions on NSCIU classification, and decisions on reduced monitoring requirements). Finally, careful documentation makes future permit reissuance easier,

¹ Organic capacity is considered the maximum loading of BOD or TSS that could impair the biological capacity of the treatment plant to treat all incoming wastes [55 FR 30121; July 24, 1990].

particularly if a new permit writer is responsible for permit reissuance. Chapter 11 discusses development of the two critical elements needed to properly document the permit issuance process—a documented record of permit procedures and decisions and a fact sheet.

CHAPTER 6. COMPONENTS OF THE COVER PAGE

The most basic and, therefore, most frequently overlooked portion of a permit is the cover page. However, drafting the cover page improperly could have significant ramifications regarding permit enforceability. An example of a cover page is in Appendix E.

6.1 FORMAT

The cover page should have the appearance of a legal document. It is recommended that the cover page appear on official agency letterhead or stationery or on a special permit form.

6.2 ELEMENTS OF THE COVER PAGE

The cover page should contain the following:

- ***Name and address of the permittee***—The correct and legal name of the permittee and the facility's physical location address. The mailing address can also appear on the cover page.
- ***Citation to legal authority***—A specific citation to the Control Authority's legal authority to issue and enforce permit provisions.
- ***Duty to comply***—The permittee's duty to comply with all applicable federal, state, and local laws even if they are not specifically incorporated into the permit.
- ***Reapplication requirements***—The permittee's duty to reapply for continuation of the permit before the expiration date.
- ***Effective period***—The permit's effective date and expiration date must be clearly set out. If the permit's or general control mechanism's effectiveness is to begin on a date other than the one on which it was signed or issued by the Control Authority, that effective date should appear clearly on the cover page. In addition, the date on which the permit or general control mechanism is signed should be on or before the effective date. Although Control Authorities may establish shorter durations, the effective periods must not extend more than 5 years into the future for SIUs.
- ***Signature of Control Authority***—The permit must be signed and dated only by a Control Authority official authorized to issue permits. Failure to sign and date the permit properly might call its validity into question at a later date. In addition, to avoid any possible misunderstanding

that the permit is some form of contract, the Industrial User should not sign the permit. For a further discussion, see Chapter 2.

The cover page should also clearly state that a violation of any permit provision is a violation of the Control Authority's sewer use ordinance (or applicable state law) and could subject the permittee to enforcement action. In addition, if the ordinance requires the Industrial User to have a permit before it can begin its discharge, the cover page should indicate that the permit allows or grants the Industrial User permission to discharge to the sewage system.

CHAPTER 7. EFFLUENT LIMITATIONS

This chapter explains how to select which pollutants to specifically regulate and how to establish permit effluent limits.

7.1 SELECTING POLLUTANTS TO BE REGULATED

To identify pollutants to be regulated, the permit writer must first determine whether the Industrial User is subject to categorical Pretreatment Standards. Next, the permit writer should determine what pollutants are present or suspected of being present in the wastewater. Then a determination can be made as to which of the pollutants to regulate. Those three steps are outlined below. Of course, specific permit limits must be included in the permit for pollutants regulated by applicable federal categorical Pretreatment Standards.

7.1.1 *Which Pollutants Require Regulation?*

The permit writer must decide which of the pollutants require regulation. The permit must contain effluent limits that are based on the following:

- Categorical Pretreatment Standards [40 CFR Parts 405–471]
- National prohibited discharges (general and specific) [40 CFR 403.5(a) and (b)]
- Local limits [40 CFR 403.5(c) and (d)]
- Other site-specific limits needed to protect the POTW, receiving water, and worker health and safety

The examples in Table 7-1 illustrate how a permit writer selects pollutants for regulation.

**TABLE 7-1
EXAMPLES OF SELECTING POLLUTANTS FOR REGULATION**

<p>EXAMPLE 1. SELECTING POLLUTANTS ON THE BASIS OF CATEGORICAL PRETREATMENT STANDARDS</p>
<p>The permit writer at the Cleanwater POTW receives a permit application from the Batteries R Us Company. The permit writer notices that the user indicated that it was not subject to any categorical pretreatment standards, but the application indicates that the company produces zinc anode batteries on-site. The application also indicates that the facility manufactures its own zinc oxide anodes and silver oxide cathodes. Furthermore, the permit writer notes that the facility's wastewater discharge includes process wastewater from the anode and cathode manufacturing processes, floor and equipment washdown, and employee showers. Even though the Batteries R Us application indicates that it was not subject to any categorical pretreatment standards, the permit writer reviewed a summary list of categorical standards (See Appendix G – Summary of Industrial Sectors with Categorical Pretreatment Standards and Requirements) and realized that EPA has established categorical pretreatment standards for battery manufacturers [40 CFR Part 461]. The permit writer will consult those regulations to determine which subpart of 40 CFR Part 461 applies to the discharger and will incorporate the appropriate categorical effluent limits in the discharger's permit.</p>
<p>EXAMPLE 2. SELECTING CONVENTIONAL POLLUTANTS FOR REGULATION</p>
<p>The operator at the Cleanwater POTW noticed that periodically the influent to his plant was milky white. He collected an influent sample and noted that the milky color was due to very fine particles in the waste that did not settle readily but produced a high TSS value. As a result, the plant violated its NPDES TSS limit. The operator traced the milky white discharge to ABC Company. After reviewing data indicating extremely high TSS concentrations from ABC Company's discharge, the permit writer included a TSS limit in the ABC Company's permit to reduce the TSS load to the POTW and thus prevent pass through.</p>
<p>EXAMPLE 3. SELECTING TOXIC ORGANIC POLLUTANTS FOR REGULATION</p>
<p>In reviewing the discharge data for the Double D Company, the permit writer noticed that the discharge contained 106 mg/L of 2,4,6-trichlorophenol and 5.3 mg/L of pentachlorophenol. The permit writer was faced with a problem. The POTW's NPDES permit does not contain limits for such pollutants, and no data are available on the levels of the pollutants in the POTW's effluent, influent, or sludge. Because the permit writer did not know the concentrations of either pollutant at the treatment plant, he decided to have the POTW analyze its influent, effluent, and sludge for the organic priority pollutants. The resulting data indicated concentrations of 0.580 mg/L and 0.060 mg/L of 2,4,6-trichlorophenol and pentachlorophenol, respectively, in the treatment plant's influent. Sludge and effluent data indicated the presence of both pollutants, with pentachlorophenol present in the effluent at levels exceeding state ambient water quality criteria. Because of concern for the water quality of the receiving stream and because of broad authority in the local ordinance for the POTW to regulate Industrial Users so as to prevent harm to the environment, the permit writer established local limits for both compounds and included the requirements in the Double D Company's permit.</p>
<p>EXAMPLE 4. SELECTING POLLUTANTS ON THE BASIS OF POTENTIAL HEALTH RISKS</p>
<p>The Anytown POTW superintendent had not noticed any apparent inhibition of his treatment system, but plant operators complained periodically about strong organic smells in the wet well and at Triple T Company's sampling manhole. In reviewing the discharge data from the Triple T Company, he noticed that the company discharged 1,2 dichloroethane. Additional sampling of the gases in the collection system revealed concentrations of 1,2 dichloroethane that exceeded the Occupational Safety and Health Administration's Immediately Dangerous to Life and Health (IDLH) levels. Because of the broad authority in the local ordinance for the POTW to regulate Industrial Users so as to ensure the health and safety of the workers at the POTW, the superintendent decided to establish a local limit for 1, 2 dichloroethane and add it to the Triple T Company's permit.</p>

7.1.1.1 Categorical Pretreatment Standards

Categorical Pretreatment Standards are technology-based standards for a selected group of industries established by EPA under authority of the CWA. These standards are developed on the basis of industry-wide studies of current treatment practices for pollution control (e.g., treatment technology) and, therefore, establish national baseline pollution control requirements for the regulated industrial categories. Pretreatment Standards are generally promulgated for both existing sources and new sources. These standards could be the same or different. If an Industrial User is subject to categorical Pretreatment Standards, the permit writer must include effluent limits based on these standards in the user's permit.

In certain situations, the Control Authority may have the option to authorize a CIU to forgo sampling for a pollutant not expected to be present [40 CFR 403.12(e)(2)]. Before implementing that option, the Control Authority must have the legal authority to implement the provision (i.e., the state and local regulations include the provision and it has been submitted to and approved by the Approval Authority in accordance with 40 CFR Part 403). If the Control Authority has determined that a monitoring waiver is appropriate, the permit must still contain the applicable effluent limitations for the pollutants with waived monitoring requirements. Furthermore, any grant of a monitoring waiver by the Control Authority must be included as a condition in the user's permit along with the requirements to submit the certification statement outlined at 40 CFR 403.12(e)(2)(v) with each user self-monitoring report. In addition, the permit must include the notification requirement that if a pollutant with waived monitoring requirements is found to be present or is expected to be present according to changes that occur in the user's operations, the user must immediately notify the Control Authority and comply with the monitoring requirements of 40 CFR 403.12(e)(1).

To include all relevant categorical Pretreatment Standards in the permit, the permit writer must be familiar with specific categorical Pretreatment Standards to which the Industrial User is subject and follow the rules below to apply categorical Pretreatment Standards.

Rules for Applying Categorical Pretreatment Standards

- Determine the proper category and subcategory for the industrial processes operated by the permittee.
- Identify all regulated, unregulated, and dilution wastestreams.
- Identify appropriate sampling locations.

- Categorical standards apply directly to specific wastestream or at the end of treatment of that wastestream. When the designated sampling location described in the permit contains a categorically-regulated wastestream and one or more other wastestreams not regulated by the same categorical standard, an alternative categorical limit must be calculated.
- If effluent limits have both the daily maximum and the monthly average categorical Pretreatment Standards, both limits must be included in the permit.
- Limitations on *all* pollutants regulated by the categorical Pretreatment Standards must be included in the permit. Note, however, that some of the categorical regulations allow the use of indicator pollutants (e.g., oil and grease monitoring in lieu of TTO monitoring for dischargers subject to 40 CFR Part 467, Aluminum Forming) or allow exemptions from monitoring for certain pollutants (usually requiring periodic certification of non-use).
- Any grant of a monitoring waiver by the Control Authority must be included in the Industrial User's control mechanism.
- Upon approval of a monitoring waiver, the Industrial User's control mechanism must include the requirement for the user to submit the certification statement at 40 CFR 403.12(e)(2)(v).
- The Control Authority has the option of converting production-based categorical Pretreatment Standards to equivalent mass or equivalent concentration limits.
- The Control Authority has the option of converting categorical Pretreatment Standards that are expressed in terms of concentration to equivalent mass limits. [Note: This provision must be incorporated into the pretreatment program in accordance with 40 CFR Part 403 before implementation.]
- The Control Authority has the option of converting flow-based mass limits for facilities in the Organic Chemicals, Plastics, and Synthetic Fibers [40 CFR Part 414], Petroleum Refining [40 CFR Part 419], and Pesticide Chemicals [40 CFR Part 455] categories to concentration-based limits. [Note: This provision must be incorporated into the pretreatment program in accordance with 40 CFR Part 403 before implementation.]
- Categorical Pretreatment Standards establish the compliance date(s) by which Industrial Users covered by the standards must be in compliance. The Control Authority cannot extend these federally promulgated dates in the permit.

Several EPA documents provide guidance on how to apply categorical Pretreatment Standards. The guidance documents should be used to supplement the information provided in this section and in the Standards themselves for incorporating categorical effluent limits into permits that are based on the standards.

Rules for Applying Production-Based Categorical Pretreatment Standards

Incorporating production-based categorical Pretreatment Standards in permits involves special considerations. The standards are expressed in terms of an allowable pollutant mass discharge per unit of production, such as pounds of pollutant per 1,000 pounds of product produced. The standards can be placed in the permit verbatim from the regulations. The permit should then require the Industrial User to submit actual production data from the date(s) on which the compliance samples were collected and to calculate the actual mass of pollutant(s) discharged, on the basis of flow and concentration, to evaluate compliance for that specific day.

Often, it might be impractical or difficult for the Control Authority to independently determine or verify compliance because the production rate and the wastestream flow and pollutant concentration must be known. The Control Authority has the option of using equivalent mass or concentration limits [40 CFR 403.6(c)]. Such limits use an industry's long-term average daily production and flow rates to derive the corresponding daily maximum and monthly average limits. The applicable formulas are shown in Table 7-2.

**TABLE 7-2
FORMULAS FOR CALCULATING EQUIVALENT LIMITS FROM PRODUCTION-BASED STANDARDS**

Equivalent Mass Limits (in pounds per day [lbs/day])
$\frac{\text{Pounds of allowable pollutant loading (categorical Standard)}}{\text{Per day for each 1,000 pounds of product produced}} \times \left(\text{Long - term average daily production rate in 1,000 pound increments} \right)$
Equivalent Concentration Limits (in milligrams per day [mg/L])
$\left[\frac{\text{Pounds of allowable pollutant loading (categorical Standard)}}{\text{Per day for each 1,000 pounds of product produced}} \times \left(\text{Long - term daily average production rate in 1,000 pound increments} \right) \right]$ $(8.34 \times \text{Long - term average process effluent flow (mgd)})$ <p style="text-align: center; font-size: small;">[Note: 8.34 is a conversion factor.]</p>

The Industrial User permit may function as the legal document for the conversion of production-based standards to equivalent mass or concentration limits. These equivalent limits are deemed Pretreatment Standards under section 307(b) of the CWA and are federally enforceable.

It is critical when converting production-based standards to equivalent mass or concentration limits that the permit writer correctly calculate the equivalent limits and document the calculations. A permit containing equivalent limits must clearly specify: (1) the applicable equivalent limits; (2) the flow and production rates upon which the limits are based; (3) the requirement that the Industrial User report a reasonable measure of its long-term production rate in each periodic compliance report; (4) the requirement that the Industrial User notify the Control Authority of significant changes in long-term flow and production rates within 2 days of knowing that they will change in the next calendar month; and (5) a provision that the Control Authority may modify the permit on the basis of such new information. Table 7-3 provides an example.

**TABLE 7-3
EXAMPLE OF INCORPORATING PRODUCTION-BASED STANDARDS AS EQUIVALENT MASS
LIMITS IN A PERMIT**

Part 1. Effluent Limitations		
A. Description of Discharges		
Pipe	Description	
01	Discharge of wastewater generated by all regulated battery manufacturing processes at the facility	
B. Effluent Limits		
Effective no later than March 9, 1987, and lasting until the expiration date of this permit, the permittee is authorized to discharge wastewater from pipe 01. This discharge is limited as specified below:		
Effluent Limitation (lbs/day)		
Limited Parameter	Daily Maximum	Monthly Average
Total Copper	0.021	0.011
Total Lead	0.005	0.002
C. Notification of Production Changes		
The production rate that was used to calculate the equivalent mass per day limits in this permit is:		
<ul style="list-style-type: none"> • 0.1 million pounds of lead used per day 		
<p><i>The permittee must report a reasonable measure of its long-term production rate in each periodic compliance report submitted to the City. In addition, the permittee must notify the City immediately of a significant change in this production rate that would cause the equivalent mass limits to have to be revised. A significant change is an increase or decrease of 20 percent from the rate stated above.</i></p>		
D. Modification		
This permit may be reopened and the effluent limits modified on the basis of any changed production rate reported in C above.		

Determining the appropriate production rate is one of the critical factors in deriving equivalent limits. EPA recommends using a production figure that approximates the long-term average. Data for a day, week, month, or year that are unusually high or low should not be used; 3 to 5 years of data should be reviewed to determine the appropriate long-term average. For example, after reviewing 5 years of data, the permit writer could select the highest yearly average (provided that this value does not vary by more than 20 percent to the most recent annual average). If a production rate varies greater than 20 percent, the Control Authority should contact the facility and determine the basis for the variation. If a facility does not have good historical data, as in the case of a new facility or a facility that has had significant operational changes, the permit writer will have to rely on the facility's future projections for production. Detailed guidance and procedures for developing and applying equivalent limits and example problems are presented in EPA's *Guidance Manual for the Use of Production-Based Pretreatment Standards and the Combined Wastestream Formula*. EPA encourages the permit writer to use that guidance manual when developing equivalent limits. If an Industrial User is expected to have significant fluctuations in the production (e.g., a 20 percent increase or decrease in the long-term average) during the permit period, a tiered permit could be considered. For more detailed discussion on tiered permits, see Section 7.2.6.

Rules for Applying Equivalent Mass Limits for Concentration Limits

Before establishing equivalent mass limits, the Control Authority must have the legal authority to implement such a provision (i.e., the state and local regulations include the provision and it has been submitted to and approved by the Approval Authority in accordance with 40 CFR Part 403). Where a program has been modified to do so, the Control Authority has the option of establishing equivalent mass limits for concentration limits [40 CFR 403.6(c)(5)]. For an Industrial User to be eligible for equivalent mass limits, the user must do the following:

- Employ or demonstrate that it will employ water conservation methods and technologies that substantially reduce water use during the term of its permit.
- Currently use control and treatment technologies adequate to achieve compliance with the applicable categorical Pretreatment Standards and not have used dilution as a substitute for treatment.
- Provide sufficient information to establish the facility's actual average daily flow rate for all wastestreams, on the basis of data from a continuous effluent flow monitoring device, as well as the facility's long-term average production rate. Both the actual average daily flow rate and long-term production rate must be representative of current operation conditions.

- Not have daily flow rates, production levels, or pollutant levels that vary so significantly that equivalent mass limits are not appropriate to control the discharge.
- Have consistently complied with all applicable categorical Pretreatment Standards during the period before the user's request for equivalent mass limits.

In addition, the following provisions must be included in a permit issued to an Industrial User subject to equivalent mass limits:

- Maintain and effectively operate control and treatment technologies adequate to achieve compliance with the equivalent mass limits.
- Continue to record the facility's flow rates through the use of a continuous effluent flow-monitoring device.
- Continue to record the facility's production rates and notify the Control Authority whenever production rates are expected to vary by more than 20 percent from its baseline production rates.
- Continue to employ the same or comparable water-conservation methods and technologies as those implemented to qualify for the equivalent mass limits.

If the Control Authority chooses to establish equivalent mass limits, it may retain the same equivalent mass limit in subsequent permit terms if the user's actual average daily flow rate was reduced solely as a result of implementing water-conservation methods and the actual average daily flow rate used in the original calculation of the equivalent mass limit was not based on the use of dilution as a substitute for treatment. In addition, the Control Authority must do the following:

- Calculate the equivalent mass limits by multiplying the actual daily flow rate of the regulated process(es) of the user by the concentration-based categorical Pretreatment Standards and the appropriate conversion factors.
- Reassess the equivalent mass limit and recalculate the limit as necessary to reflect changed conditions at the facility.

Rules for Applying Equivalent Concentration Limits for Mass Limits

Before establishing equivalent concentration limits, the Control Authority must ensure that it has the legal authority to implement such a provision (i.e., the state and local regulations include the provision and it been submitted to and approved by the Approval Authority in accordance with 40 CFR Part 403). Where

the program has been modified to do so, the Control Authority has the option to convert the mass limits of the categorical Pretreatment Standards at 40 CFR Parts 414, 419, and 455 to concentration limits [40 CFR 403.6(c)(6)]. When establishing equivalent, concentration-based Pretreatment Standards instead of mass limits (i.e., flow-based limits) the Control Authority must document that dilution is not being used as a substitution for treatment. Additionally, the Control Authority is required to adjust the permit limits when the wastestream used for demonstrating compliance with the permit limits is mixed with nonprocess wastewater or from other processes.

The Control Authority may also determine that an Industrial User should be subject to both the flow-based, mass limit as well as the equivalent concentration-based limit. If both limits are incorporated into a permit, the Industrial User would have to comply with both limits.

Rules for Applying Pollutant Not Expected to be Present

Before authorizing an Industrial User to forgo sampling of a pollutant not present, the Control Authority must ensure that it has the legal authority to implement such a provision (i.e., the state and local regulations include the provision and it has been submitted to and approved by the Approval Authority in accordance with 40 CFR Part 403). Where the program has included this provision, the Control Authority has the option to authorize a CIU to forgo sampling of a pollutant if the user can demonstrate through sampling and a technical evaluation of the facility's operations, that a given pollutant is neither present nor expected to be present in the discharge, or is present only at background levels [40 CFR 403.12(e)(2)]. This provision, however, does not supersede the certification processes and requirements established in categorical Pretreatment Standards, except as specified in the categorical Pretreatment Standard (e.g., TTO certification for metal finishing, 40 CFR Part 433).

Such an authorization is subject to the following conditions:

- The Control Authority may authorize a waiver where a pollutant is determined to be present solely because of sanitary wastewater discharged from the facility, provided that the sanitary wastewater is not regulated by an applicable categorical Pretreatment Standard and includes no process wastewater.
- The monitoring waiver is valid only for the duration of the effective period of the permit but in no case longer than 5 years. The user must submit a new request for the waiver before the waiver may be granted for each subsequent permit.

- In making a demonstration that a pollutant is not present, the user must provide data from at least one sampling of the facility's process wastewater before any treatment present at the facility that is representative of all wastewater from all processes.
- The request of a monitoring waiver must be signed in accordance with 40 CFR 403.12(l) and include the certification statement in 40 CFR 403.6(a)(2)(ii).
- Nondetectable sample results may be used only as a demonstration that a pollutant is not present if the EPA-approved method from 40 CFR Part 136 with the lowest minimum detection level for that pollutant is used in the analysis.
- Any grant of the monitoring waiver by the Control Authority must be included as a condition in the user's permit. The reasons supporting the waiver and any information submitted by the user in its request for the waiver must be maintained by the Control Authority for at least 3 years after the expiration of the waiver. In addition, the following provisions must be included as permit provisions.

- Upon approval of the monitoring waiver, the user must certify on each report with the statement below, that there has been no increase in the pollutant in its wastestream because of activities of the user:

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 the last periodic report under 40 CFR 403.12(e)(1).

- If a waived pollutant is found to be present or is expected to be present on the basis of changes that occur in the user's operation, the user must immediately comply with the monitoring requirements of 40 CFR 403.12(e)(1) or other, more frequent monitoring requirements imposed by the Control Authority and notify the Control Authority.

7.1.1.2 National Prohibited Discharges

Section 403.5(a) and (b) of the General Pretreatment Regulations establishes general and specific prohibitions that apply to all nondomestic users that discharge to POTWs (see Table 7-4). Local ordinances for POTWs with approved pretreatment programs must include the authority for local

enforcement of those provisions. The permit writer should keep informed of developments in this area to ensure that all permits accurately incorporate all federal pretreatment requirements.

**TABLE 7-4
NATIONAL PROHIBITED DISCHARGES**

General Prohibitions

A user may not introduce into a POTW any pollutants that cause pass through or interference [40 CFR 403.5(a)(1)].

Specific Prohibitions

The following pollutants must not be introduced into a POTW:

- Pollutants that create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 262.21 [40 CFR 403.5(b)(1)]
- Pollutants that will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the POTW is specifically designed to accommodate such discharges [40 CFR 403.5 (b) (2)]
- Solid or viscous pollutants in amounts that will cause obstruction to the flow in the POTW resulting in interference [40 CFR 403.5(b)(3)]
- Any pollutant, including oxygen demanding pollutants (BOD, and the like) released in a discharge at a flow rate or pollutant concentration that will cause interference with the POTW [40 CFR 403.5(b)(4)]
- Heat in amounts that will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits [40 CFR 403.5(b)(5)]
- Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil in amounts that will cause interference or pass through [40 CFR 403.5(b)(6)]
- Pollutants that result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that could cause acute worker health and safety problems [40 CFR 403.5(b)(7)]
- Any trucked or hauled pollutants, except at discharge points designated by the POTW. [40 CFR 403.5(b)(8)]

Table 7-5 is an example of incorporating the national specific prohibitions with other locally derived prohibitions into a permit. The preferred means is by direct inclusion of verbatim language from the sewer use ordinance. This language may be inserted either in the effluent limits section or in the standard conditions section of the permit.

**TABLE 7-5
EXAMPLE OF INCORPORATING PROHIBITED DISCHARGES IN PERMIT**

VERBATIM IN STANDARD CONDITIONS SECTION OF PERMIT

Part IV—STANDARD CONDITIONS

1. The permittee must comply with all the general prohibited discharge standards in Section 5 of the city ordinance. Namely, the Industrial User must not discharge wastewater to the sewer system:
 - a) Wastewater having a temperature greater than [_____] degrees F (_____] degrees C)], or that will inhibit biological activity in the treatment plant resulting in Interference, but in no case wastewater that causes the temperature at the introduction into the treatment plant to exceed 104 degrees F (40 degrees C);
 - b) Fats, oils, or greases of animal or vegetable origin in concentrations greater than [_____] mg/L;
 - c) Pollutants that create a fire or explosion hazard in the POTW, including wastestreams with a closed cup flashpoint of less than one hundred forty (140) degrees Fahrenheit (60 degrees C) using the test methods specified in 40 CFR 261.21;
 - d) Wastewater causing two readings on an explosion hazard meter at the point of discharge into the POTW, or at any point in the POTW, of more than [_____] percent (_____)% or any single reading over [_____] percent (_____)% of the Lower Explosive Limit of the meter.
 - e) Solid or viscous substances in amounts that will cause obstruction of the flow in the POTW resulting in Interference [but in no case solids greater than ____ inch(es) (____”) or _____ centimeter(s) (____ cm) in any dimension];
 - f) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;
 - g) Having a pH lower than 5.0 or higher than [____], or otherwise causing corrosive structural damage to the POTW or equipment;
 - h) Pollutants that result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that could cause acute worker health and safety problems;
 - i) Noxious or malodorous liquids, gases, solids, or other wastewater that, either singly or by interaction with other wastes, are sufficient to create a public nuisance or hazard to life, or to prevent entry into the sewers for maintenance or repair;
 - j) Sludges, screenings, or other residues from the treatment of industrial wastes;
 - k) Containing any substance that could affect the treatment plant’s effluent and cause violation of the NPDES permit requirements;
 - l) Containing any substance that would cause the treatment plant to be in noncompliance with sludge use, recycle or disposal criteria pursuant to guidelines or regulations developed under section 405 of the Clean Water Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act or other regulations or criteria for sludge management and disposal as required by the state;
 - m) Wastewater that imparts color, which cannot be removed by the treatment process, such as, but not limited to, dye wastes and vegetable tanning solutions, which consequently imparts color to the treatment plant’s effluent, thereby violating [the name of the POTW’s] NPDES permit;
 - n) Medical wastes, except as specifically authorized by the [the Superintendent] in a permit;
 - o) Stormwater, surface water, ground water, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by [the Superintendent];
 - p) Wastewater causing, alone or in conjunction with other sources, the treatment plant’s effluent to fail toxicity tests;

Table 7-5 (continued)

- | |
|--|
| <ul style="list-style-type: none">q) Detergents, surface-active agents, or other substances that that might cause excessive foaming in the POTW;r) Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations; ors) Pollutants, including oxygen-demanding pollutants (BOD, and the like) released in a discharge at a flow rate or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW. |
|--|

7.1.2.3 Local Limits

Section 403.5(c) of the General Pretreatment Regulations requires Control Authorities to develop and enforce specific limits to implement the general prohibition against pass through and interference [40 CFR 403.5(a)] and the specific prohibitions [40 CFR 403.5(b)]. In July 2004, EPA published an extensive guidance document on developing and implementing local limits (*Local Limits Development Guidance*). For the purposes of this guidance manual, it is assumed that the Control Authority has developed local limits in accordance with that guidance or some other acceptable approach.

The Control Authority might have established local limits for any number of pollutants. The two main considerations on how to incorporate such local limits into Industrial User permits are whether the sewer use ordinance contains all the local limits and how the Control Authority has allocated its maximum allowable industrial loading to its Industrial Users.

The Control Authority must have the legal authority to implement its approved local limits. The permit must include a list of all applicable local limits even if the Control Authority is not requiring the Industrial User to monitor for all or any of the pollutants with local limits. This approach ensures that the Industrial User is aware of all local limits. The permit must also include monitoring requirements as specified by 40 CFR 403.12 for all the pollutants of concern. The permit writer can establish monitoring requirements for the pollutants present in the discharge. However, the monitoring frequency for pollutants known to be absent, or present at levels at or below local background concentrations, could be reduced.

The Control Authority may develop industry-specific local limits. Because each permitted industry receives different numerical limits, it is difficult to incorporate them into a local sewer use ordinance. In such a situation, the sewer use ordinance will generally establish the authority to develop and implement local limits and state that the limits will be enforced through Industrial User permits. All local limits applicable to the Industrial User must be included in its permit. This is particularly important because the

limits are not incorporated in the ordinance. The monitoring frequency for any pollutant of concern could then be set on the basis of the pollutant's presence in the wastestream.

Establishing or revising local limits is considered to be a modification of the POTW's pretreatment program. Therefore, the Control Authority must submit to the Approval Authority for its review and approval any new or changed local limits. The POTW must submit a notice to the Approval Authority that states the basis for the modification and must provide a modified program description and other documentation requested by the Approval Authority. Modifications that relax local limits, except for the modifications to local limits for pH and reallocations of the Maximum Allowable Industrial Loading of a pollutant that do not increase the total industrial loadings for the pollutant, are considered to be substantial program modifications. Approval procedures for modifications of local limits are described in 40 CFR 403.18. After the Approval Authority approves a modification, the Control Authority shall incorporate it into the POTW's NPDES permit [40 CFR 403.18 and 40 CFR 122.62].

7.1.2.4 Best Management Practices

BMPs are management and operational procedures that are intended to prevent pollutants from entering a facility's wastestream or from reaching a discharge point. BMPs are defined as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the general and specific prohibitions listed at 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. There are two different circumstances in which BMPs may be Pretreatment Standards. The first is when a POTW establishes BMPs as local limits or in addition to the local limits to implement the general and specific prohibitions. The second is when the BMPs are categorical Pretreatment Standards established by EPA. The Control Authority should use BMPs instead of numeric limits where determining compliance with numeric limits is infeasible or as a supplement to numeric limits as appropriate to meet the requirements of the CWA.

Before implementing BMPs as a supplement to local limits, the Control Authority must ensure that it has the legal authority to implement such a provision (i.e., the state and local regulations include the provision and it has been submitted to and approved by the Approval Authority in accordance with 40 CFR Part 403).

Where the program has been approved to do so, the Control Authority has the option to use BMPs in lieu of numeric limits. BMPs required, however, by a categorical Pretreatment Standard are not optional and must be included in CIU permits [40 CFR 403.8(f)(1)(iii)(B)(3)]. As such, the CIU permits must include

applicable BMPs as required by categorical Pretreatment Standards. For example, facilities may develop toxic organic management plans in lieu of sampling to demonstrate compliance with the TTO limit at 40 CFR Part 433 (Metal Finishing category).

If the Control Authority has been approved to use BMPs in lieu of or in addition to numeric limits, the BMPs should include the following:

- *Specific notice to Industrial Users of requirements and enforceability.* Such a notice, provided through POTW sewer use ordinances or individual or general control mechanisms, should make clear which users are subject to BMPs, and what affected users must do to comply with their requirements.
- *Installation of treatment.* POTWs should provide criteria or specifications that the equipment must satisfy. For example, a requirement for use of oil/water separators at auto repair facilities could include sizing and design criteria. EPA cautions POTWs to avoid endorsing the use of specific brands or vendors.
- *Requirements for or prohibition on certain practices, activities, or discharges.* POTWs should include specific requirements or prohibitions where necessary to ensure that the use of such BMPs is protective. An example would be a prohibition on discharges of tetrachloroethene from dry cleaning facilities.
- *Requirements for O&M of treatment units.* POTWs should spell out their operations and maintenance (O&M) expectations to ensure that treatment systems continue to perform as designed and installed. For example, restaurants could be required to have grease interceptors cleaned out at a specified frequency.
- *Time frames associated with key activities.* POTWs should provide time frames for when management practices must be implemented or when required treatment must be installed and fully operational. Other milestones should be added to the schedule where necessary to facilitate the oversight of BMP implementation.
- *Compliance certification, reporting and records retention.* Establishing specific procedures for such requirements will enable POTWs to verify whether required equipment has been installed or whether required maintenance has been performed at the specified frequency.
- *Provision for reopening or revoking the BMP conditions.* As with numeric limits, POTWs should include language in the sewer use ordinance or facility control mechanisms that enables them to

revoke the control mechanism at any time to include modified numeric limits or BMPs. For example, the POTW may find it necessary to revoke an Industrial User's control mechanism where the POTW determines that the user has not complied with applicable BMPs or where the POTW determines that it is easier to determine compliance with a numeric limit.

- *Any other requirements as determined by the Control Authority.*

There are at least two ways to impose BMPs in permits: (1) by requiring the Industrial User to develop and implement BMPs (either a comprehensive plan or a plan addressing specific problems); or (2) by imposing site or pollutant-specific requirements (e.g., removing or sealing floor drains or containing stored chemicals). The applicable BMP conditions may be incorporated in multiple sections of a permit since BMP requirements can include special monitoring requirements or activities, reporting and recordkeeping requirements, and/or treatment requirements.

If the BMP includes an implementation of a plan, the plan should be reviewed when submitted; but it is not generally necessary or advisable for the Control Authority to approve the plan. Compliance with the plan cannot relieve the Industrial User of its liability if its discharge causes or contributes to pass through or interference. Approval of the plan could be misconstrued as Control Authority sanction even though the plan when implemented might not be effective in controlling slug loads or other problematic discharges. The Control Authority has the discretion to reject any BMP that it deems to be inadequate to prevent interference, pass through, or violate the specific prohibitions.

When incorporating special conditions in the control mechanism, the permit writer should use language that clearly identifies what specific activities must occur and when they must occur or be completed. Examples of activities include criteria, specifications, and timeline of installation of treatment and requirements for O&M of treatment units.

Additional information on BMPs is in Appendix H. For more information, see the following EPA documents:

- *Guidance Manual for Control of Slug Loadings to POTWs*
- *Guidance Manual for Implementing Total Toxic Organics (TTO) Pretreatment Standards*
- *NPDES Best Management Practices Guidance Document*
- *Appendix W—Best Management Practices Mini-Case Studies in the Local Limits Development Guidance*

A slug discharge control plan is a specific type of BMP. A slug discharge is any discharge of a nonroutine episodic nature, including an accidental spill or a noncustomary batch discharge, that 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)]. If the Control Authority determines actions to control slug discharges are necessary, the SIU's permit must include provisions addressing those requirements to control slug discharges [40 CFR 403.8(f)(1)(iii)(B)(6)]. As noted previously, the Control Authority should review the SIU's slug discharge control plan to ensure that the plan contains all of the federal requirements, but the Control Authority should not approve the plan.

EPA expects that POTWs will include language in the permit that requires control of slug discharges rather than the terms of a particular SIU's plan. Including the entire slug discharge control plan could prove to be administratively burdensome because changes made to the plan during the term of the permit could require the Control Authority to modify the permit or reopen and reissue the permit.

7.2 APPLYING EFFLUENT LIMITS

It is important that the permit writer correctly apply the effluent limits in the permit. The permit should clearly designate the sampling point(s) where the limits apply, the period in which the limits apply (e.g., from a specific date to a specific date if different from the effective period of the permit), and the units (e.g., mg/L or lbs/day). In addition, the effluent limits should be expressed in terms of the duration for which the limits themselves are intended to apply (e.g., instantaneous maximum, maximum daily, or monthly average) and such terms should be well defined. For example, an instantaneous maximum value is the maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event. On the other hand, a maximum daily discharge limit is defined as the highest allowable *daily discharge*, and daily discharge is defined as the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for the purposes of sampling. For pollutants with limits expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limits expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the day [40 CFR 122.2].

7.2.1 What Other Pollutants Are Present?

The permit writer should review the permit application and other supplemental materials requested from the Industrial User. For example, analytical data on wastewater quality indicate actual pollutants present before treatment and the concentration/strength of the pollutants in the wastewater. The permit writer can use a list of raw materials to identify additional possible pollutants that could be present in the wastestream. In addition, the permit writer should review flow data to identify variability in pollutant and hydraulic loadings. If the permit writer identifies additional pollutants present that are not regulated by categorical Pretreatment Standards, the permit writer should either determine if local limits are already established or need to be developed for these pollutants. If these pollutants do not have local limits, the permit writer could consider obtaining additional monitoring data to determine if local limits are needed for these pollutants. The permit writer is reminded that all applicable local limits must be included in the permit.

7.2.2 Relationship of Local Limits to Categorical Pretreatment Standards

Categorical Pretreatment Standards and local limits are distinct and complementary types of Pretreatment Standards. Promulgation of a categorical Pretreatment Standard by EPA in no way relieves a Control Authority from its obligation to evaluate the need for, and to develop, local limits to meet the general and specific prohibitions in the General Pretreatment Regulations. As mentioned earlier, categorical Pretreatment Standards are developed to achieve a degree of water pollution control for selected industries and pollutants on the basis of a national assessment of available technology and costs. Local limits are intended to prevent site-specific POTW and environmental problems resulting from Industrial Users.

In implementing its pretreatment program, a Control Authority is required to enforce the *applicable Pretreatment Standard* (i.e., federal, state, or local, whichever is most stringent). When the Control Authority is drafting a permit for an Industrial User subject to categorical Pretreatment Standards, the task of applying the applicable effluent limits can be complicated. Local limits are often more stringent than categorical Pretreatment Standards because they are based on local, site-specific situations. In addition, there might be local limits for more pollutants than are regulated in the applicable categorical Pretreatment Standard. Therefore, a permit may contain a mixture of categorical Pretreatment Standards and local limits. One complicating factor is that, in contrast to the categorical Pretreatment Standards that apply to individual discharges from regulated processes (end-of-process), local limits normally apply at the point(s) of discharge to the public sewer system (end-of-pipe).

In the situation where the Industrial User's discharge to the public sewer contains *only* wastewater from a process regulated under a particular categorical standard, the end-of-process pollutant load is the same as

the end-of-pipe pollutant load. The determination of which limits apply, local or categorical, is accomplished by simply choosing the limit that is numerically more stringent if the terms of duration of the limits are the same (e.g., both limits are daily maximum limits or monthly average limits). More commonly, the industry's discharge at the point of connection contains a mixture of categorical process wastestreams and noncategorical process wastestreams. If categorical standards are to be applied at the end-of-pipe where additional wastestreams exist, the permit writer must adjust the categorical Pretreatment Standards to end-of-pipe limits. Appendices I and J contain guidance for calculating production-based standards and using the CWF, respectively. Such adjusted limits must then be compared to the Control Authority's local limits, and the most stringent limit would be included in the permit. The example in Table 7-6 illustrates the results of comparing federal and local limits.

TABLE 7-6
EXAMPLE OF FACT SHEET DOCUMENTING THE DETERMINATION OF THE MOST
STRINGENT DAILY MAXIMUM EFFLUENT LIMITS

Parameter	Daily PSES	Monthly PSES	Daily CWF	Monthly CWF	Local daily limit	Daily final limit	Monthly final limit**
Cadmium	0.69	0.26	0.46	0.17	0.1	0.1	0.17
Chromium (Hex)	--	--	--	--	0.1	0.1	--
Chromium (Total)	2.77	1.71	1.85	1.14	1.0	1.0	1.14
Copper	3.38	2.07	2.26	1.38	5.0	2.26	1.38
Cyanide	1.20	0.65	*	*	2.0	1.20 *	0.65 *
Lead	0.69	0.43	0.46	0.29	0.1	0.1	0.29
Manganese	--	--	--	--	1.0	1.0	--
Mercury	--	--	--	--	0.005	0.005	--
Nickel	3.98	2.38	2.66	1.59	2.0	2.0	1.59
Silver	0.43	0.24	0.28	0.16	0.1	0.1	0.16
Zinc	2.61	1.48	1.74	0.99	5.0	1.74	0.99
TTO***	2.13	--	1.42	--	1.0	1.0	--

Note: All concentrations are in mg/L unless otherwise noted.

Key:

PSES = Pretreatment Standards for Existing Sources, metal finishing category [40 CFR Part 433.15(a)]

CWF = Alternative metal-finishing standards after use of the combined wastestream formula

Local Limit = Maximum pollutant concentrations established by the Control Authority

Final Limit = Final limits based on most stringent of local, state, and federal standards

* Cyanide limits must apply to the segregated cyanide wastestream of the cyanide destruct treatment process.

** The discharger is required to comply with both the daily maximum and monthly average limits, if applicable.

*** The pollutants regulated by the categorical TTO limit and the local TTO limit are the same.

In other instances, the Control Authority might find it necessary or preferable to monitor the industrial discharge at more than one location. In such a case, the permit must clearly indicate where the specific limits apply and where samples for various parameters must be collected. For example, a Control Authority might want to regulate a metal-finishing industry by requiring monitoring for local limits at the connection to the sewer system, monitoring for categorical Pretreatment Standards at the discharge from the treatment facility, and monitoring for cyanide on the segregated wastestream from the cyanide treatment unit.

7.2.3 Concentration- or Mass-Based Limits

As noted in Section 7.1.1.1, the Control Authority may have the authority to establish equivalent mass limits or equivalent concentration limits for federally established concentration-based and mass-based limits, respectively. The Control Authority might also want to establish the same flexibility when applying its local limits. The permit writer needs to be familiar with how the local limits were developed, how they are meant to be implemented, and how they were adopted into the sewer use ordinance.

Local limits are generally expressed as numeric values, which are upper bounds of the amount of pollutant that may be discharged to the POTW by Industrial Users. During the local limits development process, the quantity of specific pollutants that may be accepted by the POTW is developed as a mass value (pounds per day) or otherwise known as maximum allowable industrial loadings. Then the maximum allowable industrial loading value is typically divided among all Industrial Users subject to local limit requirements and converted into a concentration-based limit. Typically, most POTWs implement their numeric limits as uniform, concentration-based local limits. (For more information regarding local limits development and implementation, see EPA's *Local Limits Development Document*, July 2004).

When to Convert Concentration-Based Local Limits to Mass Limits

There might be circumstances when applying an equivalent mass limit is more appropriate than applying a concentration limit. Before converting concentration-based local limits to mass limits, the permit writer should review how the local limits were originally established to determine the maximum allowable loading values allocated for each Industrial User. By converting concentration-based local limits to mass limits, the permit writer ensures that the maximum allowable loading allocated to that Industrial User is not exceeded and that compliance is not achieved through dilution. The following are some situations in which the permit writer should consider converting concentration-based local limits into mass limits:

- Batch dischargers
- Dischargers with excessive or variable wastewater flow
- Dischargers with seasonal variations

To evaluate compliance with the equivalent mass limit, the permit writer must obtain or require the Industrial User to submit appropriate flow measurements of the wastewater discharged to the POTW. The applicable formula is shown in Table 7-7.

When to Convert Mass-Based Local Limits to Concentration Limits

Even though local limits are typically concentration-based limits, some POTWs have adopted mass-based local limits. If your POTW has adopted mass-based local limits, there might be situations when these limits should be converted to concentration limits. By converting mass-based local limits to concentration limits, the Control Authority can evaluate compliance with effluent requirements of local limits by simply comparing the analysis result with the numeric limit. The following are some situations in which the permit writer should consider converting mass-based local limits to concentration limits.

- Dischargers with consistent wastewater discharge flow rates
- Dischargers with consistent compliance

The applicable formula is shown in Table 7-7.

**TABLE 7-7
FORMULAS FOR CONVERTING LOCAL LIMITS**

Concentration-based limits (mg/L) to mass limits (lbs/day)	
$\left(\begin{array}{c} \text{User's Discharge Flowrate} \\ \text{in million gallons per day} \\ \text{(mgd)} \end{array} \right) \times \left(\begin{array}{c} \text{Concentration - based limit} \\ \text{in milligrams per liter} \\ \text{(mg/L)} \end{array} \right) \times \left(\begin{array}{c} \text{Conversion factor} \\ 8.34 \end{array} \right)$	= Equivalent mass limit, lbs/day
Mass-based limits (lbs/day) to concentration limits (mg/L)	
$\frac{\left(\begin{array}{c} \text{User's Allowable Pollutant loading} \\ \text{(pounds per day [lbs/day])} \end{array} \right)}{\left(\begin{array}{c} \text{User's average daily discharge flowrate} \\ \text{(mgd)} \end{array} \right) \times \left(\begin{array}{c} \text{Conversion factor} \\ 8.34 \end{array} \right)}$	= Equivalent concentration limit, mg/L

7.2.4 NSCIU Requirements

The Control Authority, at its discretion, may establish the authority to classify some CIUs as NSCIUs. If the Control Authority has established this authority, the Control Authority should consider how it will regulate its NSCIUs. Because NSCIUs are no longer considered significant users, there is no federal requirement to control these users through a permit or any other control mechanism. The Control Authority, however, at its own discretion, can establish the authority to issue permits to these users. Regardless of whether an Industrial User is determined to be an NSCIU, it is still a categorical discharger and, as such, is still required to comply with applicable categorical Pretreatment Standards and related reporting and notification requirements at 40 CFR 403.12(b), (c), (d), (f), (j), (l), and (p). Furthermore, the Control Authority still must perform the same minimum oversight of an NSCIU that is required for other facilities that are not SIUs, including notifying the CIU of its status and requirements, reviewing required reports and certifications, verifying that daily regulated flow rates do not exceed 100 gpd, random sampling and inspection, and investigating noncompliance as necessary.

If the Control Authority has established the necessary authority to permit these dischargers, the permit writer should include the following:

- Applicable categorical and local effluent limitations
- Necessary reporting and notification requirements.

7.2.5 Zero-Discharge Requirements

The Control Authority, at its discretion, may prohibit the discharge of certain wastewaters (e.g., storm water, chlorinated swimming pool waters) into the POTW, in addition to the general federal prohibitions.

Furthermore, some categorical pretreatment standards require a facility to not discharge certain process wastewaters. For those facilities, the permit writer should evaluate whether there is a potential for the facility to actually discharge the prohibited process wastewater into the POTW. Considerations for “potential” are discussed in detail in Section 2.2 of this manual.

A Control Authority may choose to issue a permit to a facility that does not discharge (zero-discharge) or is prohibited to discharge process wastewater. There are special conditions that the Control Authority should include in the permit for this type of facility. These conditions are discussed in detail in Section 10.3 of this manual.

7.2.6 Tiered Permits

The Control Authority could encounter situations in which one set of effluent limits might not be appropriate for the permit's entire period (e.g., where production rates and associated wastestream volume discharged varies). A tiered permit might be appropriate in such situations, eliminating the need for continual permit revisions. For example, an Industrial User may be issued one set of limits for the average production rate and another set that takes effect when there is a significant change in the average production rate. Generally, a 10 to 15 percent deviation above or below the long-term average production is within the range of normal variability. Predictable changes in the long-term production higher than that range could warrant consideration of a tiered permit. Tiered permits are recommended where the long-term average production varies by 20 percent or greater. Typically, there are three situations in which tiered permits are warranted.

The first situation would involve a facility that the Control Authority knows will begin a new process or add a new process line during the term of the permit. In such a case, the permit writer could include two sets of limits—one set for the current conditions and one set for the future conditions. The permit should also clearly state the terms and conditions under which each set of limits would apply.

The second situation would involve an industry that has an annual pattern of low- and high-production rates. For example, an industry that produces Christmas items might operate at only 40–50 percent capacity from January through June, but at full capacity from July through December. In such a case, the permit writer would also develop two (or more) sets of limits for the industry. For seasonal variations, the permit could stipulate either dates or production levels that would trigger the application of one set of limits versus another. For that type of permit, a special condition should be included in the permit that requires the Industrial User to notify the Control Authority when the scheduled production change occurs *or* if unexpected circumstances cause seasonal operations to differ from the fixed periods defined in the permit.

The third scenario would involve an industry where the demand is variable, and the permit modification process is not fast enough to respond to the need for higher or lower equivalent limits. A permit might be written with two or three tiers that apply to ranges of production. For example, a hypothetical battery plant has a historical average production rate that varies between 40 and 100 percent with a maximum average production rate of 2.0×10^6 lbs/day. The plant is subject to a production-based categorical standard for pollutant X – 1 lb/million lb of product (daily maximum). Alternate effluent limits might be set as follows:

- First Tier: Basis of Calculation. 1×10^6 lbs/day
Limit for Pollutant X 2.0 lbs/day (daily maximum)
Applicable Production Range: 0.8×10^6 to 1.2×10^6 lbs/day
- Second Tier: Basis of Calculation. 1.4×10^6 lbs/day
Limit for Pollutant X 2.8 lbs/day (daily maximum)
Applicable Production Range: $> 1.2 \times 10^6$ to 1.6×10^6 lbs/day
- Third Tier: Basis of Calculation. 1.8×10^6 lbs/day
Limit for Pollutant X 3.6 lbs/day (daily maximum)
Applicable Production Range: $> 1.6 \times 10^6$ to 2.0×10^6 lbs/day

The first tier has an applicable production range that covers plus or minus 20 percent of the basis of the calculation for that tier. This can be seen by noting that the basis of calculation for the first tier is 1×10^6 lbs/day, and the threshold level that would trigger the next tier is set at 1.2×10^6 lbs/day or 20 percent higher. Similarly, the second and third tiers have applicable production ranges of 14 percent and 11 percent, respectively. That is consistent with the general rule (mentioned earlier) that a 10 to 15 percent change in average production rate is within the range of normal variability while a 20 percent or greater change should warrant alternate limits.

The production range for each tier must be specified in the permit, and the Industrial User must be required to report the measurements or estimates of the actual production rate that prevailed during the reporting period. The anticipated production rate for the next reporting period should also be reported.

For a tiered permit, a special notification condition should be included in the permit that requires the Industrial User to notify the Control Authority within 30 days before a change in production.

A tiered permit requires an increased technical and administrative role by the Control Authority to verify compliance with effluent limits. The permit should be issued only after careful consideration and only when a substantial change in the long-term average rate of production or other changes that effect permit conditions are likely to occur.

CHAPTER 8. MONITORING AND REPORTING REQUIREMENTS

Once an Industrial User's effluent limits are developed, the permit writer's next step is to establish monitoring and reporting requirements. Requiring the Industrial User to routinely self-monitor and to report the results of such monitoring 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. If an Industrial User is not monitoring, it does not know how well the pretreatment controls are working. The Control Authority should be aware of and concerned with the potential problems of self-monitoring, such as improper sample collection or preservation, poor analytical techniques, and falsification of records. To prevent or minimize such problems, the permit writer should clearly detail monitoring and reporting requirements in the permit.

The permit's monitoring and reporting section should contain 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 should consider 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

The permit writer must carefully consider such factors because any error can lead to inaccurate compliance determination or misapplication of federal or local requirements. In particular, several categorical Pretreatment Standards contain special monitoring requirements for specific regulated pollutants. Table 8-1 contains some examples of these special monitoring requirements.

**TABLE 8-1
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.

TABLE 8-1 (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.

8.1 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

If there is no ready access to a representative sampling point, the Control Authority should 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 should 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 [40 CFR 403.6(e)].

EPA has clarified, in the preamble to the October 17, 1988, revisions to the General Pretreatment Regulations [53 FR 40562; October 17, 1988], that 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. For an explanation of calculating adjusted categorical limits, the permit writer should refer to Appendix J, Combined Wastestream Formula Fact Sheet.

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 8-2
EXAMPLES OF SPECIFYING 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.

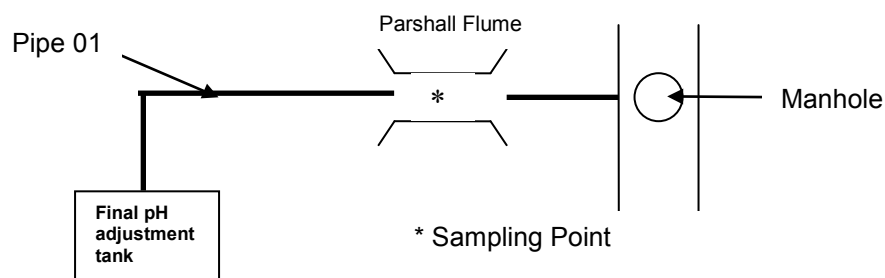
EXAMPLE OF SAMPLING LOCATION SPECIFIED BY DIAGRAM

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.



The permit writer must consider each of the above factors to identify the most practical and most representative sampling location(s). Once the sampling locations are selected, the permit writer must clearly specify the sampling locations in the permit. The permit writer should not assume that the sampling locations are known by other Control Authority staff or by the permittee. Changes in either Control Authority or industrial personnel can result in loss of knowledge of the exact sampling location unless the sampling locations are clearly defined in the permit. Examples in Table 8-2 illustrate three ways of specifying sampling locations by using brief narrative descriptions, designation by numbers, and a diagram. If one or more sampling points are identified, each location and the limits and any applicable monitoring requirements that apply should be clearly specified in the Industrial User's permit.

8.2 POLLUTANTS TO BE MONITORED

The POTW should always require Industrial User self-monitoring 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. For further guidance on how to conduct an assessment of whether pollutants are expected to be present in particular wastestreams, see Section 7.1.1.1 of this manual. Some categorical Pretreatment Standards allow alternatives to sampling specific regulated pollutants. The permit writer must review the specific monitoring and reporting requirements contained in the applicable categorical pretreatment regulations. In addition, EPA's *Guidance Manual for Implementing Total Toxic Organics (TTO) Pretreatment Standards* contains guidance on the TTO monitoring alternatives.

The Control Authority is not required to limit the pollutants to be sampled to only those subject to effluent limits. It 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 (discussed in more detail in Chapter 10). The permit writer should also require the Industrial User 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 [70 FR 60173; October 14, 2005, 40 CFR 403.6(c)(5)(iii)(A)]. A flow-monitoring requirement can also serve as a reminder to collect flow data for those SIUs that are required to report daily maximum and average flows in semiannual reports [40 CFR 403.12(g)].

8.3 SAMPLE TYPE

The permit must specify 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. The permit writer should review the sampling objectives and the advantages and disadvantages of each sample type. According to the sampling requirements specified at 40 CFR 403.12(g)(3), 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.

Because two types of composite samples exist—flow proportional and time proportional—the permit writer should clearly specify or define the sample type. The sample period should also be specified. Generally, the sample period is 24 hours, but if the Industrial User's discharge is for only 8 hours each day, the permit writer could specify that the composite sample be collected over the 8 hours of discharge. The number of grab samples should be specified (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 intervals).

8.3.1 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).

8.3.2 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 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.

8.4 MONITORING FREQUENCIES

The Control Authority has considerable discretion in establishing monitoring frequencies. However, federal regulations [40 CFR 403.12(e)(1)] 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 must require monitoring and

reporting, at least once every 6 months, from all other SIUs [40 CFR 403.12(h)]. Furthermore, monitoring must be conducted to satisfy BMR, 90-day compliance report, and repeat noncompliance monitoring reporting requirements pursuant to 40 CFR 403.12. In establishing monitoring frequencies, the permit writer's primary task is to achieve a reasonable balance between the need for sufficient representative data to assess compliance and the expense or burden of obtaining such data. Each of the following factors should 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
- 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

The Control Authority might wish to develop a base level monitoring frequency to be imposed on all Industrial Users and use the above factors to increase or decrease the monitoring frequencies on a case-by-case basis from the established base monitoring frequency. EPA recommends frequencies 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 8-3). The Control Authority could also adopt the monitoring frequency that EPA used in developing categorical Pretreatment Standards (generally, this frequency is 10 times per month for inorganics).

TABLE 8-3
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.

Excerpt from: EPA's Pretreatment Compliance Monitoring and Enforcement Guidance

Before reducing an Industrial User's monitoring frequency or classifying a CIU to be a middle-tier or nonsignificant CIU, the Control Authority must ensure that it has the legal authority to do so (i.e., the state and local regulations include the provision) and the program has been modified in accordance with 40 CFR Part 403.

For programs that have been modified to incorporate the NSCIU provision (in accordance with 40 CFR Part 403), the Control Authority has the option to classify a CIU as nonsignificant. If the Control Authority chooses to treat a qualifying CIU as an NSCIU, the Industrial User is still required to provide baseline

monitoring and 90-day compliance reports (as required by 40 CFR 403.12(b) and (d)]. A qualifying CIU is a discharger that discharges no more than 100 gpd of total categorical wastewater to the POTW and has consistently complied with all applicable categorical Pretreatment Standards and Requirements, and never discharges any untreated, concentrated wastewater [40 CFR 403.3(v)(2)]. The NSCIU, however, is not required to conduct any subsequent monitoring and is not required to provide periodic compliance reports [40 CFR 403.12(e)]. As an NSCIU, the discharger is still considered a CIU, but is no longer considered an SIU and, therefore, is not required to be issued a control mechanism. An NSCIU, however is required to submit an annual certification statement signed in accordance with 40 CFR 403.12(l).

For programs that have been modified to incorporate the reduced monitoring provisions (in accordance with 40 CFR Part 403), the Control Authority also 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 permit writer might want to 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 permit writer could require a small electroplater that batch discharges once a month to monitor when the batch discharge occurs. Or the permit writer could decide to require the batch discharger to monitor and submit the monitoring results to the Control Authority before the batch may be discharged.

For an example on how to specify monitoring frequencies, see Appendix E, Sample Permit Fact Sheet and Industrial User Permit. Additional monitoring requirements may be inserted in the monitoring requirements section of the permit or in the permit's special conditions section discussed in Chapter 10.

8.5 ANALYTICAL METHODS

The General Pretreatment Regulations [40 CFR 403.12] 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.

8.6 REPORTING REQUIREMENTS

Along with establishing self-monitoring requirements, the permit writer must specify reporting requirements in the permit. At least once every 6 months, SIUs are required to submit a characterization of their discharge. These periodic compliance reports must contain the following:

- The concentration, or production and mass, of regulated pollutants in the Industrial User's effluent
- The measured or estimated average and maximum flow rates for the reporting period
- Documentation to evaluate compliance with any BMP or pollutant prevention requirements

In cases where the Control Authority conducts all the sampling and analysis and the Control Authority collects the flow data, the Control Authority might determine that the Industrial User does not need to submit a monitoring report. If the Control Authority has chosen this alternative and is collecting all the data that would ordinarily be required from the Industrial User (e.g., flow data, production data) and at a frequency that would be expected of the user if it were conducting self-monitoring, the Control Authority may waive the requirement that the Industrial User report continuing compliance [40 CFR 403.12(g)]. In such a case, the Control Authority should explicitly state in the permit that periodic monitoring and reporting requirements are waived but still include a list of all applicable effluent limits in the permit. Even if the Control Authority has decided to waive an Industrial User's continued compliance reporting requirements, the Industrial User is still required to submit documentation required by the Control Authority to determine compliance with any BMP or pollution prevention alternatives.

A list of all pretreatment reporting requirements outlined in 40 CFR Part 403 is described in detail in Table 8-4. The permit writer should review this table and include applicable reporting requirements in each permit. These reporting requirements can be placed in the permit together with any additional local reporting conditions. Some examples of actual permit reporting conditions are provided in Table 8-5.

The Control Authority must require appropriate reporting from Industrial Users. When drafting an Industrial User's reporting requirements, the permit should contain the following information in sufficient descriptive detail:

- *What* types of information are to be contained in each report (e.g., analytical data, flow data, or production data)
- *When* each report is to be submitted to the Control Authority (specifying the dates and frequency for submission)
- *Who* is responsible for signing and certifying the reports (e.g., an authorized corporate official)
- *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
- *How* the reports can be submitted to the Control Authority (e.g., electronic versus hardcopy submittals)

**TABLE 8-4
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	<ul style="list-style-type: none"> To provide baseline information on industrial facility to Control Authority To determine wastewater discharge sampling points To determine compliance status with categorical Pretreatment Standards 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To track progress of the industrial facility through the duration of a compliance schedule 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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

TABLE 8-4 (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	<ul style="list-style-type: none"> To provide the Control Authority with current information on the discharge of pollutants to the POTW from categorical industries 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To certify that a pollutant is not present or expected to be present at a facility 	<ul style="list-style-type: none"> 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))

TABLE 8-4 (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	<ul style="list-style-type: none"> To provide the Control Authority with current information on the discharge of pollutants to the POTW from categorical industries 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To alert the POTW of the potential hazards of the discharge 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To alert the POTW of a known violation and potential problem that could occur 	<ul style="list-style-type: none"> Nature and magnitude of the violation; other information as determined by the POTW

TABLE 8-4 (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	<ul style="list-style-type: none"> To provide the POTW with current information on the discharge of pollutants to the POTW from Industrial Users not regulated by categorical standards 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To notify the POTW of anticipated changes in wastewater characteristics and flow that could affect the POTW 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To notify the POTW of the name of the hazardous waste and type of discharge (batch or continuous) 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> To notify the POTW of changes that might require the facility to implement procedures to control slug discharges 	<ul style="list-style-type: none"> All changes that could affect the potential of a slug discharge

TABLE 8-4 (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	<ul style="list-style-type: none"> To provide to the POTW a statement that the facility is in compliance with the definition of NCSIU 	<ul style="list-style-type: none"> 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]	<p>If possible, at least 10 days before the date of the anticipated bypass.</p> <p><i>OR</i></p> <p>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.</p>	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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.

TABLE 8-5
EXAMPLE OF REPORTING REQUIREMENTS IN A PERMIT

SECTION 2 – REPORTING REQUIREMENTS

A. Periodic Compliance Reports

1. In accordance with 40 CFR 403.12(e) and Section 99.15 of the Anytown General Ordinance, the permittee must, after the effective date of the permit, submit to the Director of Public Works reports indicating the nature and concentration of pollutants in the effluent that are limited by the standards specified in Part 1 of the permit. The reports are due by July 15 (for the reporting period of January through June) and January 15 (for the reporting period of July through December). The report must include a record of daily flow during each reporting period.
2. In cases where the Pretreatment Standard or local limits require compliance with a Best Management Practice (or pollution prevention alternative), the permittee is required to submit documentation required by the City or the Pretreatment Standard necessary to determine compliance.
3. If the permittee monitors any pollutant more frequently than required by this permit, in accordance with 40 CFR Part 136 or other EPA-approved methods, the results of such monitoring must be submitted with the applicable periodic report.
4. Where the permittee is subject to production-based standards, the permittee must submit the appropriate production data as specified below:
 - a) If the permittee is subject to equivalent mass or concentration limits, the production data reported must be a reasonable measure of the permittee's long term production rate, or
 - b) If the permittee is subject to limits expressed only in terms of allowable pollutant discharge per unit of production, the production data reported must be the actual average production rate for the reporting period.

B. New or Changed Wastewater Reporting

1. The permittee must notify the City 90 days before the introduction of any new wastestreams or pollutants, or any substantial increase or decrease in the volume (i.e., 20 percent or greater variance from the monthly average flow) or characteristics of existing wastestreams discharged to Outfall 1, described above, or any other outfall of the permittee.
2. The permittee must notify the City immediately of any changes at its facility affecting the potential for a Slug Discharge.

C. Prevention of Spills and Accidental Discharges

1. The permittee must provide to the City, under Section 99.29, plans showing facilities and operating procedures to provide protection against spills or accidental discharges of prohibited or regulated materials as established by Section 99 of this permit. Such plans must include, but are not limited to the following:
 - a) Diking systems for containment
 - b) Alarm systems including test frequency of alarms
 - c) Employee education programs
 - d) Manhole sealing and repiping
2. The permittee must provide the spill prevention and accidental discharge control plans showing facilities and operating procedures to the City for review within 30 days of the effective date of the permit.
3. The City must review and approve plans before construction of any facilities.

TABLE 8-5 (Continued)

D. Accidental Discharge Reporting

1. The permittee must notify the City immediately upon the occurrence of an accidental discharge, slug, spill, or any bypassing or overflow of untreated wastewater containing substances regulated by Section 99 of this permit to the sanitary sewer from the permittee's facility. The notification must be as specified in Section 99.02(7)(h).

E. Upset and Bypass Reporting

1. As specified in Section 99.04(8) and (9) of the ordinance, the permittee must notify the City within 24 hours of the first awareness of an upset or unanticipated bypass experienced by the permittee of its treatment that places it in a temporary state of noncompliance with wastewater discharge limitations contained in this permit or other limitations specified in Section 99. The following information must be submitted:
 - a) A description of discharge and cause of noncompliance/bypass,
 - b) The period of noncompliance including exact dates and times or, if not corrected, the anticipated time the noncompliance/bypass is expected to continue, and
 - c) The steps being taken and planned to reduce, eliminate, and prevent reoccurrence of the noncompliance/bypass.
 - d) A written report must be submitted, within 5 days of becoming aware of the upset or bypass, containing the above information.
2. The permittee must submit prior notice at least 10 days in advance of a planned bypass that could result in violation of applicable Pretreatment Standards.

F. Compliance Schedule Progress Reports

1. Not later than 14 days following each compliance schedule event in Part 3, Sections A1 and A2, the permittee must issue a progress report to the City indicating whether the increment of progress has been met, and if not, the reason for the delay and the date the permittee expects to comply with the increment of progress.

G. Noncompliance Report

1. General Noncompliance

If the permittee's self-monitoring results indicate a discharge limit violation, the permittee must notify the City within 24 hours of becoming aware of the violation. The permittee must also repeat the sampling and analysis and submit the results of the repeat analysis to the City within 30 days after becoming aware of the violation.

H. All reports required by this section must be signed by a responsible corporate officer or other duly authorized representative.**I. All reports required by this permit must be submitted to the City at the following address:**

City of Anytown Public Works Department
Attention: Pretreatment Coordinator
123 Walnut Street
Anytown, USA 11111

8.6.1 What Types of Information

Table 8-6 provides the permit writer with the types of information required for the Industrial User's periodic compliance reports. Those reporting requirements are generally included in either the standard conditions section or the reporting requirements section. Again, the format and language for that provision and any other reporting requirements are left to the Control Authority's discretion.

If a permit writer would like to incorporate a compliance schedule for meeting categorical Pretreatment Standards into a permit, the permit writer must ensure that the final compliance date does not exceed the compliance deadline established for the specific categorical pretreatment standard. Further, if a CIU is subject to a compliance schedule contained in the permit, the permit writer must require the submission of periodic reports on the progress of compliance schedule activities. 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 writer has incorporated other compliance schedules (i.e., installation of sampling locations, development and implementation of slug discharge control plans), the permit writer should require submission of periodic progress reports of the compliance activities and a final compliance date.

Furthermore, the permit writer must impose any special reporting requirements on CIUs required by the specific categorical pretreatment regulations. A list of other special reporting requirements for specific CIUs are at Appendix G, Summary of Industrial Sectors with Categorical Pretreatment Standards and Requirements.

Finally, Table 8-4 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 permit writer should review Table 8-4 to ensure that any additional applicable reporting requirements, and the associated information required for each report, are incorporated into the permit.

TABLE 8-6
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.

TABLE 8-6 (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

8.6.2 When Reports Should be Submitted

The permit writer must require Industrial Users subject to Pretreatment Standards 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 (e.g., an NSCIU certifying that it has been in compliance with the definition of NSCIU from the period of January through June 2009, but submitted the certification in May 2009).

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:

- Industrial User's size in terms of significance of its flow to the POTW's treatment plant
- Nature of the Industrial User's discharge (i.e., the quantity and quality of the pollutants discharged)
- Industrial User's compliance history
- Industrial User's current self-monitoring frequency

In addition to including the reporting dates of periodic compliance reports and notification of exceedance requirements, the permit writer should also review the reporting requirements outlined in Table 8-4. The permit writer should ensure that any additional applicable reporting requirements, and the associated due dates required for each report, are incorporated into the permit.

8.6.3 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:

- (a) 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
 - (i) 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;
 - (ii) 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.
- (b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship, respectively.
- (c) 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.
- (d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if
 - (i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);
 - (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates,

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

(iii) the written authorization is submitted to the Control Authority

- (e) 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.

8.6.4 Where Reports Are to be Sent

The reporting requirements section of the permit should also 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 8-5.

8.6.5 How Reports May be Submitted

The POTW can specify different methods that Industrial User must use when submitting its required reports. For example, the POTW can develop a template that all Industrial Users must use to submit their periodic compliance sampling results and certification statements. If the POTW requires the use of a specific reporting format, this requirement should be clearly established in the permit.

In addition, a POTW may require its Industrial Users to submit its required reports electronically. According to 40 CFR 403.8(g), before accepting electronic reports, the POTW must ensure that it has satisfied the requirements of 40 CFR Part 3 [Cross-Media Electronic Reporting Regulation (CROMERR)]. Under CROMERR, both new and existing electronic reporting systems require EPA approval. The regulation provides a framework for applying for, and obtaining such approval.

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CHAPTER 9. STANDARD CONDITIONS

The standard conditions in an Industrial User's permit should set forth the administrative and procedural requirements that are applicable to all Industrial Users and therefore should be repeated verbatim in every permit. Standard conditions are an essential element of every permit. Unless there are changes to the Control Authority's legal authority, the standard conditions might be developed only once. Standard conditions often reiterate many provisions contained in the sewer use ordinance. Such reiteration is the best way of notifying the Industrial User of its responsibilities and the procedural and administrative aspects of the permit program.

Standard conditions outline the general duties and responsibilities of each Industrial User. The order, language, and format of the standard conditions in permits are a matter of the Control Authority's discretion. Examples are provided in Table 9-1. The permit writer should use clear and specific language. This will ensure an adequate understanding of the provisions by all parties and avoid ambiguity that could give rise to alternative interpretations that could hinder enforceability. The Control Authority should have its attorney review the conditions before they are used in permits to ensure that there is adequate authority in the sewer use ordinance for each provision and that they are understandable and free of legal loopholes.

**TABLE 9-1
EXAMPLES OF DIFFERENT LANGUAGE USED TO INCORPORATE STANDARD CONDITIONS
INTO INDUSTRIAL USER PERMITS**

PERMIT MODIFICATION OR REVISION
<p><i>Example No. 1:</i> The City reserves the right to amend this permit at any time, in accordance with Chapter 13.16 Code of General Ordinances, to provide for more stringent limitations or requirements.</p>
<p><i>Example No. 2:</i> The City may modify the terms of the permit to meet the City's NPDES discharge permit requirements, if substantial changes of the permittee's operations or wastewater occur, if applicable federal Pretreatment Standards are amended, or if the Superintendent of the City's treatment works determines that there is other good cause. To the extent otherwise permissible by law, changes or new conditions in the permit must include a reasonable schedule for compliance.</p>
<p><i>Example No 3:</i> The City may modify the terms and conditions of this permit at any time as identified in Section 29.03(5) of the City's sewer use ordinance. Any new conditions in the permit must include a reasonable time schedule for compliance unless the modification incorporates a new requirement that includes an alternative compliance schedule. The City may also modify the permit to incorporate special conditions resulting from the issuance of a special order.</p>

TABLE 9-1 (Continued)

DILUTION OR EXCESSIVE DISCHARGE
<p><i>Example No. 1:</i> An industry may not increase the use of potable or process water in any way or mix separate wastestreams for the purpose of diluting a discharge as a partial or complete substitute for adequate treatment to achieve compliance with any applicable federal Pretreatment Standards, limits in Section 29.02 of the City's Ordinance, or any other limitations set forth in this permit.</p> <p><i>Example No. 2:</i> The permittee may not increase the use of process water or, in any way, attempt to dilute a discharge to achieve compliance with the limitations contained in this permit.</p>
PROPER DISPOSAL OF PRETREATMENT SLUDGES AND HAZARDOUS WASTES
<p><i>Example No 1:</i> The disposal of sludges generated within wastewater treatment systems must be in accordance with applicable state and federal regulations, specifically section 405 of the Clean Water Act and Subtitle C and D of the Resource Conservation and Recovery Act and section 319-333 of the state code.</p> <p><i>Example No 2:</i> Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater must be disposed of in a manner such as to prevent any such materials from entering the Authority's sewerage system.</p>

Depending on the amount of detail provided in the Control Authority's sewer use ordinance, standard conditions for Industrial User permits may be taken from the Control Authority's sewer use ordinance and incorporated verbatim into the control mechanisms. The Control Authority can also condense or expand provisions from its sewer use ordinance and use them as standard conditions as long as the conditions in the control mechanism are consistent with the provisions in the sewer use ordinance.

Some of the standard conditions ordinarily contained in an Industrial User's permit are below. Example language used to specify such conditions are in Appendix F, Sample Standard Conditions for Permits.

- *Definitions of terms* used in the permit. Terms that might need to be defined include composite and grab samples; instantaneous measurement; 4-day average, monthly average, or 30-day average; slug discharge; and effluent data and upset.
- The Industrial User's *duty to comply* with all provisions of the permit and the local sewer use ordinance, including the duty to comply with the general discharge prohibitions. (In some cases, the general discharge prohibitions may be included verbatim as a separate standard condition.)
- The Industrial User's *duty to comply* with all *applicable federal Pretreatment Standards* including those that become effective during the term of the permit and that compliance with the permit is not a defense for violation of applicable federal Pretreatment Standards.

- The Industrial User's *duty to provide information* to the Control Authority. Within a reasonable time, the Industrial User is required to submit any information that the Control Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit.
- The Industrial User's *duty to mitigate* or to take all reasonable measures to lessen the duration and severity of any permit violation.
- The POTW's *authority to modify or revise* an Industrial User's permit at any time during the permit's effective term if certain conditions (such as new information, new federal standards, or evidence of fraud in the permit application) arise.
- Notice that the permit does not convey any *property rights* of any sort, or any exclusive privilege.
- *Need to halt or reduce activity not a defense*. It must not be a defense for an Industrial User in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of the permit.
- *Notice that the permit can be revoked* if violations of permit conditions or local ordinances are identified or the falsification or misrepresentation of information by the Industrial User is determined.
- *Nontransferability* of the permit if there is a change of owner or operator. The permit is issued to a specific entity and cannot be transferred by the Industrial User.
- *Right of appeal* provided to the Industrial User within a limited period after permit issuance after which the right to challenge or appeal administratively or in a court of law is deemed waived.
- *A severability clause* that allows the remaining parts of a permit to remain in force if any portion of the permit is found invalid and subsequently is suspended or revoked by a court of law.
- The Industrial User's responsibility or *duty to reapply* for a new permit before expiration of the current permit.
- Provisions requiring the installation and proper *operation and maintenance of wastewater treatment facilities* by the Industrial User, including proper calibration and maintenance of all sampling equipment.
- Provisions requiring the proper *disposal or treatment of sludges and other wastes* (e.g., spent chemicals) generated at the Industrial User's facility so as to prevent the discharge of such materials to the POTW.

- A condition that *prohibits* the *dilution* of Industrial User wastewaters as a partial or complete substitute for treatment of the wastewaters before discharge to the POTW.
- *Monitoring requirements* (in addition to those specified in other portions of the permit) including
 - An outline of specific records to be maintained during sampling events (i.e., name of individuals who performed the sampling; date, time, sample method used, and location of sampling; name of the individuals who performed the analysis; date and time of analyses; analytical method used; and the results of such analysis)
 - The requirement to follow EPA-approved sampling methods in 40 CFR Part 136, or other EPA-approved methods
 - The requirement to implement Quality Assurance/Quality Control (QA/QC) procedures such as proper installation and maintenance of flow-monitoring and sampling equipment, periodic calibration of sampling and monitoring devices, and laboratory QA/QC procedures
 - The requirement to resample within 30 days of an identified effluent violation
- *Reporting requirements* (in addition to those specified in other portions of the permit), such as
 - The name and address of Control Authority personnel to whom applicable compliance monitoring reports are to be submitted
 - The requirement to notify the Control Authority of spills, slug loadings, accidental discharges of concern, upsets, or bypasses
 - The requirement to notify the Control Authority of any *planned changes* in industrial processes, production rates, or in the volume or characteristics of wastewaters discharged to the POTW, including changes that could affect slug discharge potential
 - Requirement that the Control Authority be *notified within 24 hours* of an identified effluent violation
 - Requirement that the Control Authority be notified of any changes in flow that would change the status of NSCIU or reduce monitoring
 - Requirement to submit resampling results within 30 days of an identified effluent violation
- A condition that requires the Industrial User to *maintain or retain records* related to industrial operations and wastewater discharges for a minimum of three years.
- Specific *signatory requirements* for all reports submitted to the Control Authority. In all cases, reports must be signed in accordance with the federal regulations [40 CFR 403.12(1)].

- Provisions that address *public access* to Industrial User records and the maintenance of *confidential information*. It should be made clear that at no time can wastewater effluent data or any other information used to develop permit limits (including production data) be claimed or held as confidential information.
- The *right of entry* or *right of access* of Control Authority personnel or its representatives to the Industrial User's property where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit. The Control Authority personnel or its representative must be granted access to perform sampling and inspection activities and to examine and copy Industrial User records.
- *Legal remedies* or enforcement measures including penalties available to the Control Authority to address violations of permit conditions.

Neither the discussion above nor the list provided in Appendix F exhausts all potential standard conditions that could be included in an Industrial User's permit. Both lists merely represent some of the more important types of conditions to be placed in the permit. The Control Authority and permit writer can establish additional standard conditions as deemed appropriate.

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CHAPTER 10. SPECIAL CONDITIONS

Special conditions are tailored to each permittee. They typically address situations that are specific to certain types of industrial facilities. In addition, they might address known or suspected problems (e.g., spills) by requiring the Industrial User to undertake a specific activity to reduce the quantity of pollutants currently discharged or to prevent the discharge of new or additional pollutants. These special requirements are typically described in a separate section of the permit. Examples of a few special conditions include compliance schedules, developing and implementing Industrial User management practices, and additional monitoring requirements.

Special conditions are based on the permit writer's professional judgment and specialized knowledge of the individual Industrial User. Because they are often based on the general authority established in the local ordinance and involve some exercise of judgment on the part of the permit writer, special conditions are more likely to be challenged. Therefore, their basis must be well documented and their use should be based on the fundamental principle of *reasonableness*.

10.1 COMPLIANCE SCHEDULES

A compliance schedule establishes milestones and deadlines for carrying out specific actions required of an Industrial User. For example, a compliance schedule may be used to delineate the phases for constructing or installing wastewater pollution control (treatment) technology or for submitting a spill plan. Each compliance schedule typically includes a brief outline of the activities required and specific target dates to meet major steps in the schedule. Table 10-1 provides an example of a compliance schedule.

A compliance schedule is often negotiated with the Industrial User to ensure that the adopted schedule is achievable. The permit writer cannot establish a schedule for compliance with a federal categorical Pretreatment Standard that extends beyond the compliance date indicated by the applicable federal categorical pretreatment regulation [40 CFR 403.12(b)(7)]. In addition, a permit compliance schedule does not relieve an Industrial User of its obligations to comply with applicable Pretreatment Standards and Requirements including the prohibitions against pass through and interference. Compliance schedules in permits to address ongoing pass through or interference issues are inappropriate. In such situations, a more immediate enforcement action, such as a Cease and Desist Order, should be issued. Once any federally established compliance deadline for a categorical Pretreatment Standard has passed, the proper

response for the Control Authority is to initiate an enforcement action that may, in appropriate instances, involve issuance of an administrative enforcement order with a compliance schedule. Of course, the permit writer may develop more stringent compliance schedules aimed at achieving compliance with federal standards before federal deadlines. Compliance schedules should contain milestone dates that reflect the shortest reasonable time in which compliance can be achieved. Finally, the Industrial User should be required to submit a progress report to the Control Authority no later than 14 days following each milestone date in the compliance schedule.

When establishing a compliance schedule for an Industrial User's permit, the permit writer should take into consideration the complexity of the improvements or actions specified as well as any seasonal factors or legal requirements that will affect the Industrial User's efforts to comply with the conditions outlined. For example, a compliance schedule requiring groundbreaking in January in areas where winter conditions could prevent such actions from taking place is not reasonable.

**TABLE 10-1
EXAMPLE OF INCORPORATING A COMPLIANCE SCHEDULE IN THE SPECIAL CONDITION
SECTION OF A PERMIT**

Permit No. 001	
Page 3-1	
PART 3 – PRETREATMENT AND MONITORING FACILITIES COMPLIANCE SCHEDULE	
A. To comply with the effluent limitations identified in Part 1, Section 2 C. and Section 3 A. 2 in a reasonable period, the permittee must provide necessary wastewater treatment as required by Sections 13.16.170 and 13.16.180, Code of General Ordinances, in accordance with the following schedule:	
EVENT	BY NO LATER THAN
1) New wastewater treatment plant design completed, clarifiers ordered, and building foundation begun.	December 30, 2007
2) Submit to the City a plant management plan for control of solvents and toxic organics.	April 19, 2008
3) Pretreatment plant building essentially complete, field-erected tank external construction in place, and piping installation begun.	June 30, 2008
4) Complete installation of new sampling devices and Palmer Bowlus flume.	September 15, 2008
5) Obtain full treatment plant operational status and achieve full compliance.	February 15, 2009
No later than 14 days following each date in the above schedule, the permittee must submit to the City a progress report including, at a minimum, whether it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with the increment of progress, the reasons for delay, and the steps being taken to return the project to the schedule established in this permit.	

10.2 ADDITIONAL MONITORING REQUIREMENTS

The Control Authority may often incorporate special monitoring requirements into Industrial User permits. Additional monitoring may be used to confirm the presence of suspected pollutants of concern (e.g., pollutants not regulated in an Industrial User's permit). For example, the Control Authority could impose biomonitoring or other toxicity testing to determine the effluent's toxicity. This additional monitoring could then be used to evaluate whether the permit should be revised to include additional effluent limits, to require installation of treatment technology, or to reject the wastewater entirely. Examples of additional monitoring conditions appear in Table 10-2.

As a response to noncompliance, the Control Authority may, as illustrated in Table 10-2, require Industrial Users to perform monitoring of pollutants in addition to those regulated in the permit. Thus, the special condition may trigger an increase in the user's self-monitoring frequency. The increased monitoring allows the Control Authority to detect patterns of continuing noncompliance and distinguish isolated violations from chronic noncompliance. Naturally, the increased monitoring also draws the Industrial User's attention to the problem through the additional costs incurred. It thereby could act as a deterrent to future incidents of noncompliance.

**TABLE 10-2
EXAMPLES OF INCORPORATING ADDITIONAL MONITORING REQUIREMENTS IN PERMITS**

EXAMPLE OF INCREASED MONITORING BECAUSE OF VIOLATIONS		
Increased Sampling in Response to Noncomplying Discharge		
1. Frequency of sampling and analysis must be increased according to the schedule listed below whenever a discharge in violation of City/EPA limits is detected. Only those parameters that are in noncompliance need to be analyzed during the resampling period.		
Parameter	Sample type	Additional no. of samples
Metals*	One-day 24-hour flow proportional composite	One per day for 2 days
pH	Continuous	Continuous (installation of a recording device)
2. Resampling of the noncomplying parameter must begin within 48 hours or on the first available weekday representative of normal metal finishing/plating operations after a violation is discovered.		
3. The results of this sampling and analysis must be reported to the City within 15 days of the sampling.		
*The term "Metals" is defined as chromium, copper, lead mercury, nickel, and zinc.		

TABLE 10-2 (Continued)

EXAMPLE OF SPECIAL TOXICITY MONITORING REQUIREMENT			
Self-Monitor Requirements			
A. Sampling and Analysis for Clarifier Discharge Criteria			
Parameter	Sample location	Sample type	Frequency
COD	Clarifier effluent	Composite	Daily
Electrolytic Respirometer (six-hour duration)	Clarifier effluent	Composite	Daily
pH	Clarifier effluent	Grab	Daily
B. Electrolytic Respirometer Methodology			
The Electrolytic Respirometer (ER) testing procedure as described in Attachment A will be used. Such a procedure may be reasonably modified by mutual agreement if the facility demonstrates that a more suitable testing procedure is available.			
<ol style="list-style-type: none"> 1. Initial ER testing should be set up by midnight with a normal run, including purge, lasting until 7:00 a.m. 2. When obvious ER failure is noticed, the test should be halted and a new one started immediately. 3. If the second ER meets the accepted standard, clarifier discharge can begin. The test should be run to completion and the City notified of results within 6 hours. 4. Although discharge can begin after the initial ER test, discharge can be stopped by the City. 5. If ER failure occurs, contact the City immediately at the following 24-hour emergency number [123-345-6789]. 			

10.3 SPECIAL CONDITIONS FOR ZERO-DISCHARGE PERMITS

The federal regulations at 40 CFR 403.3(v)(2) state that the Control Authority, under defined circumstances, may classify a facility that is subject to categorical Pretreatment Standards and therefore an SIU as an NSCIU. The conditions for classification as an NSCIU are discussed in Section 7.2.4. The NSCIU would not be subject to the requirement for control through a permit or other individual control mechanism.

A Control Authority may choose to regulate zero-discharging NSCIUs with a zero-discharge permit. Before issuing a zero-discharge permit, the Control Authority should determine the facility's potential for discharge. Considerations for *potential* are discussed in detail in Section 2.2 of this manual. At a minimum the facility's permit should contain the following conditions:

- A statement indicating that no discharge of process wastewater is permitted.

- Requirements to notify the POTW of any changes resulting in a potential for discharge.
- Requirements to certify periodically that no discharge has occurred.
- Notice that the POTW may inspect the facility as necessary to assess and assure compliance with the no-discharge requirement.
- Requirement to comply with Resource Conservation and Recovery Act (RCRA) and state hazardous waste regulations regarding the proper disposal of hazardous waste.

The permit writer should keep in mind that there are federally regulated industries that must not discharge any process wastewater pollutants because of the industries' categorical classification. Appendix G (Summary of Industrial Sectors with Categorical Pretreatment Standards and Requirements) identifies specific no-discharge requirements for categorical facilities. The permit should clearly identify the process wastewater or pollutants or both that are prohibited from being discharged.

Also, specific reporting frequencies are established for SIUs, CIUs, and NSCIUs. Therefore, the permit writer should review these reporting frequencies and include the appropriate reporting requirements specific to each zero-discharging facility.

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CHAPTER 11. DOCUMENTATION OF PERMIT DECISIONS

After the permit has been drafted, the permit writer should create a permanent record of the procedures followed and the basis for the decisions made during the permitting process. Although such documentation might initially seem an unnecessary and a time-consuming task, it will inevitably play a critical role in any permit challenge, and, in the long run, it can save the permit writer a great deal of time and effort. Some of the principal reasons for documenting permit decisions are the following:

- To remind the permit writer of the basis of the previous permit
- To document that permit conditions were developed in a reasonable, nonarbitrary manner and in accordance with proper procedures
 - Categorical classification rationale (e.g., PSES and PSNS applicability)
 - Determination of appropriate sampling location(s)
 - Production-basis and flow rates for calculating alternative limits
 - Rationale for any applicable BMPs
 - Compliance history
 - The basis for increased or decreased sampling frequency
 - The basis of pollutants to be monitored
 - Rationale for slug discharge control requirements
- To streamline future permitting issuances through the creation of a complete file containing all information used in developing previous permits that need to be revised only if circumstances change
- To create a permanent record of permit development
 - In case personnel changes occur
 - For institutional memory
 - As an explanation of permit conditions to other personnel within the pretreatment staff or in the event that the Control Authority and the permittee disagree on the meaning of particular permit conditions
- To explain permit conditions and their basis to the Industrial User and to the public
- To ensure any permit modifications are adequately documented

- To identify operating condition changes at the permittee's facility that could result in a permit modification
- To satisfy possible Approval Authority requirements for documentation of permitting rationale

11.1 PERMIT FACT SHEET

The basis for decisions made during the permitting process are generally summarized in a document commonly referred to as the *permit fact sheet*. The fact sheet briefly sets forth the significant factual, legal, procedural, and policy questions considered in preparing the permit. In addition, the fact sheet should summarize the findings of review of the application, inspections, and other materials necessary to describe the rationale for the conditions imposed in the control mechanism. The fact sheet should be kept attached to a copy of the permit in the Control Authority's files. The components of a fact sheet are presented in Table 11-1, and an example is in Appendix E.

**TABLE 11-1
COMPONENTS OF A PERMIT FACT SHEET**

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| <ol style="list-style-type: none">1. Brief description of Industrial User, including the following:<ul style="list-style-type: none">• Name, address, and location of the facility• Number of connections that the facility has to the sewer system, specifying the one(s) relevant to the fact sheet• Type of operations in which the facility is engaged (e.g., manufacture of battery terminals)• Brief description of the plant processes or other sources of generating wastewater• Categorical determination (if applicable).• List of raw materials used• Description of treatment processes (if applicable), including any O&M requirements• Description of sampling location2. Type and quantity of the discharge:<ul style="list-style-type: none">• Rate or frequency of the discharge; the average and maximum daily flow• Daily maximum and monthly average discharge of any pollutants present in significant quantities or subject to limitations or prohibition |
|--|

TABLE 11-1 (continued)

3. Basis for the permit limits, including the following:
 - Permit application documents
 - Analytical data for pollutants provided in both a complete and summary form so that they can be easily reviewed and verified
 - Copies of or citations to federal, state, and local regulations
 - Copies of literature information where used to develop the permit limits (e.g., pages from the development documents)
 - Plant layouts and process and wastewater flow diagrams.
4. Detailed discussion of any special conditions in the permit and the rationale for pollutant selection and limits development, including the following:
 - Rationale for any monitoring waivers (e.g., pollutant not present), if applicable
 - Rationale for reduced monitoring, if applicable
 - Classification of NSCIU, if applicable
 - Equivalent limits, if established
 - Coverage under a general control mechanism, if applicable
5. Calculations showing the actual numbers used to derive each limit, including the following:
 - Combined wastestream formula or flow-weighted average calculations
 - Equivalent mass or concentration-based limits calculations
 - Local limits allocation basis

Because permit fact sheets are not a binding part of the permit, any permittee requirements must be included in the permit for the requirement to be enforceable. The permit fact sheet should specify only the rationale as to why requirements were incorporated into the permit.

11.2 PERMIT RECORD

The permit writer should document all verbal discussions with the public and permittee and to keep copies of all correspondence exchanged. For example, an Industrial User might not be able to measure the flow of wastewater discharged to the POTW at the time of permit application or could be measuring the flow after it is combined with nonprocess wastestreams. The permit writer and the user might agree upon mutually acceptable wastewater flows to be used in developing the effluent limits. Such discussions and decisions should be documented. The Control Authority should establish a file in which all records pertaining to the development and issuance of the permit are kept. Relevant documents to include in this file are the following:

- The completed permit application
- Baseline monitoring report, if applicable
- Draft permit and fact sheet
- All correspondence and data relating to the development of the permit
- Decisions regarding monitoring waivers, equivalent and alternative limits, general control mechanism coverage, NSCIU status, and reduced monitoring
- Record of any telephone conversations with interested parties concerning the permit
- Record of any public hearing or meetings
- Copies of all comments received
- Copies of all replies or responses to comments received

PART III

Overview of Requirements

Regarding POTW Receipt of Hazardous Wastes

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CHAPTER 12. OVERVIEW OF REQUIREMENTS REGARDING POTW RECEIPT OF HAZARDOUS WASTES

The Control Authority should be aware that if its treatment plant accepts hazardous wastes by truck, rail, or dedicated pipeline within the property boundary of the treatment plant(s), that POTW is a hazardous waste treatment, storage, or disposal facility (TSDF) and is subject to regulation under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 *et seq.* RCRA establishes a comprehensive program regulating the management of nonexempt hazardous wastes from the time they are generated until ultimate disposal (i.e., a *cradle to grave* management system). Under the RCRA domestic sewage exclusion, mixtures of domestic sewage and other wastes (including hazardous wastes) that mingle in the collection system before reaching the POTW's property boundary are excluded from RCRA regulation. However, wastes that are delivered by truck, rail, or dedicated pipeline do not fall within this exclusion. Hazardous wastes received by these routes may be accepted by POTWs only if the POTWs comply with RCRA *permit-by-rule* regulations. State hazardous waste programs may also have laws governing POTWs that accept hazardous waste for treatment.

Under RCRA permit-by-rule regulations in 40 CFR 270.60(c), the POTW would be deemed to have a RCRA permit if it meets the following conditions:

- Have and comply with the conditions of an NPDES permit [40 CFR 270.60(c)(1) and (2)]
- Apply for an EPA identification number [40 CFR 264.11]
- Use a manifest system [40 CFR 264.71]
- Reconcile manifest discrepancies with the hazardous waste generator or transporter [40 CFR 264.72]
- Keep a written operating record of hazardous wastes received and treatment, storage, and disposal methods for the hazardous wastes [40 CFR 264.73(a) and (b)(1)]
- Submit a biennial report to the Regional administrator [40 CFR 264.75]
- Submit a report to the Regional administrator notifying EPA of any unmanifested hazardous wastes at the time of receipt [40 CFR 264.76]
- Institute corrective action, as necessary, as specified in the POTW's NPDES permit (for permits issued after November 8, 1984) [40 CFR 364.101]

- Require all wastes received to meet all federal, state, and local pretreatment requirements, as if the wastes were being conveyed to the POTW by sewer, pipe, or similar conveyance [40 CFR 270.60(c)(4)]

For a discussion of the requirements, see EPA's *Guidance for Implementing RCRA Permit-by-Rule Requirements at POTWs*.

A POTW can assume that it is receiving hazardous wastes by truck or rail if the wastes are accompanied by the hazardous waste manifest used in the RCRA program. If the waste hauler does not provide such a manifest, the POTW might still wish to determine if the hauled wastes are considered hazardous because RCRA responsibilities apply even if the POTW accepts such wastes unknowingly. To be considered a hazardous waste, a waste must first be considered a *solid waste* as defined in 40 CFR 261.2. To determine if a solid waste is regulated under federal regulations as a hazardous waste, the POTW must determine whether the waste in question is excluded from regulation under 40 CFR 261.4(b). If it is not excluded, the POTW must then determine whether the waste in question falls into one of the following categories:

- It is *listed* as a hazardous waste in Subpart D of 40 CFR Part 261 (unless it has been specifically delisted)
- It has not been listed, but it exhibits any of the *characteristics* of a hazardous waste described in Subpart C of 40 CFR Part 261
- It is a *mixture* of a listed waste and a nonhazardous waste or is derived from the treatment of a listed hazardous waste (unless it has been specifically excluded under 40 CFR 261.3). (Note: A mixture of a characteristic waste and a nonhazardous solid waste, or the residue from the treatment of a characteristic waste, is considered hazardous only if it exhibits one or more of the hazardous waste characteristics.)
- For more information on identifying and regulating hazardous wastes, see the following EPA guidance materials:
 - RCRA Information on Hazardous Wastes for Publicly Owned Treatment Works
 - *RCRA Orientation Manual* (prepared by the Office of Solid Waste)
 - Guidance Manual for the Identification of Hazardous Waste Delivered to Publicly Owned Treatment Works by Truck, Rail, or Dedicated Pipeline
 - Guidance for Implementing RCRA Permit-by-Rule Requirements at POTWs

POTWs can choose not to accept the delivery of hazardous wastes by truck rail or dedicated pipeline by

- Strictly prohibiting the discharge of any hauled wastes
- Prohibiting the discharge of any industrial process wastes (i.e., accepting only domestic waste from haulers or dedicated pipelines)
- Prohibiting the discharge of hazardous waste (e.g., accept hauled or dedicated pipeline industrial process wastes but only if accompanied by sufficient documentation to demonstrate that wastes are not hazardous)

Reliable monitoring must be conducted to ensure that such conditions are met. The Control Authority should evaluate each of these methods before making a decision as to which method is the most appropriate for its treatment plant. Considerations such as local community practices should be taken into account (e.g., is contract hauling of household and industrial septage wastes common in the community, or are most locations serviced by municipal sewer collection systems?).

In addition to the RCRA requirements incorporated by reference into the permit-by-rule requirements for POTWs, there might be other requirements that apply as a matter of law. For example, sections 3004(d), (e), and (g) of RCRA prohibit the land disposal of hazardous waste in specified situations. Such requirements and others could apply to POTWs receiving hazardous waste by truck, rail, or dedicated pipeline. For other RCRA requirements that might apply to POTWs that receive hazardous wastes by truck, rail, or dedicated pipeline, see Appendix D of EPA's *Guidance for Implementing RCRA Permit-by-Rule Requirements at POTWs*.

In summary, the Control Authority should determine the applicability of RCRA requirements and responsibilities if its treatment plant accepts hauled wastes, especially if any of the hauled wastes are known or suspected to have been collected from industrial sites. POTWs not accepting hauled or dedicated pipeline hazardous wastes but that are considering doing so, should be aware of the RCRA responsibilities and potential liabilities associated with such practices.

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