

NPDES Compliance Inspection Manual

Chapter 9



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CHAPTER 9 – PRETREATMENT

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Related Websites

Office of Wastewater Management (OWM) National Pretreatment Program Homepage:
<https://www.epa.gov/npdes/national-pretreatment-program#overview>

A. REVIEW OF THE GENERAL PRETREATMENT REGULATIONS

DEVELOPMENT OF 40 CFR PART 403

In addition to materials in this chapter, inspectors must be familiar with Chapter 1, "Introduction," and Chapter 2, "Inspection Procedures."

The Clean Water Act (CWA) requires the Environmental Protection Agency (EPA) to promulgate regulations to control the discharge of pollutants to the Nation's waters to preserve their physical, chemical, and biological integrity. The CWA addresses the problem of indirect discharges of pollutants from industrial and commercial users of Publicly Owned Treatment Works (POTWs) to waters of the United States by requiring the EPA to promulgate federal standards for the pretreatment of wastewater discharged to a POTW. See CWA section 307(b)(3). To address indirect discharges from nondomestic users⁴ to POTWs, EPA has established the National Pretreatment Program as a component of the National Pollutant Discharge Elimination System (NPDES) program. (The NPDES permitting program is the primary regulatory mechanism to control point-source discharges to the surface waters of the United States.) Pretreatment regulations apply to all nondomestic sources that introduce pollutants into a POTW. These sources of indirect discharges are more commonly referred to as Industrial Users (IUs). The National Pretreatment Program requires industrial and commercial dischargers to treat or control pollutants in their wastewater before discharge to POTWs that could pass through or interfere with the treatment plant, impact the collection system, threaten worker health and safety, or contaminate sludges.

The CWA provides for EPA to approve states to administer their own NPDES program under prescribed conditions. Authorized state NPDES programs must have authority to issue permits for discharges from POTW that assure that compliance with pretreatment standards by significant sources subject to such standards (see CWA section 402(b)(8)).

EPA initially promulgated the General Pretreatment Regulations (40 CFR Part 403) on June 26, 1978. The regulations have been revised and updated multiple times. The most recent significant update to the Pretreatment Regulations was promulgated on October 14, 2005 (70 FR 60134). The 2005 rule, known as the Pretreatment Streamlining Rule, includes revisions that reduce the overall regulatory burden on both industrial users of the POTW system (IUs) and the pretreatment program Control Authorities (as explained below and defined in 40 CFR 403.3) without adversely affecting environmental protection. The rule is available at <https://www.epa.gov/npdes/npdes-pretreatment-streamlining-rule-fact-sheets>. It differs from other major amendments to the General Pretreatment Regulations in that it increased POTW flexibility in program implementation, allowing, in certain instances, a reduction in minimum program requirements. Approved pretreatment programs in existence at the time of the Streamlining Rule are likely based on the older, more restrictive requirements. POTWs may need to modify their approved pretreatment programs.

⁴ Pretreatment regulations apply to all nondomestic sources that introduce pollutants into a POTW. These sources of indirect discharges are more commonly referred to as Industrial Users (IUs).

A summary of the General Pretreatment Regulations is provided in Table 9-1. Major technical changes resulting from final regulatory amendments or court decisions are included in this table.

SUMMARY AND BACKGROUND

The three specific objectives cited in 40 CFR 403.2 of the General Pretreatment Regulations are to:

- Prevent the introduction of pollutants that would cause interference with the POTW system or limit the use and disposal of its sludge.
- Prevent the introduction of pollutants that would pass through the treatment works or be otherwise incompatible.
- Improve the opportunities to recycle or reclaim municipal and industrial wastewaters and sludges.

In addition, objectives of the pretreatment program include improved POTW worker health and safety and reduction of influent loadings to sewage treatment plants. Briefly stated, the definitions for interference and pass through are the following (see 40 CFR 403.3 for exact definitions):

- “Interference” is a discharge that alone or in conjunction with other discharges, disrupts the POTW or sludge processes, uses, and disposal, and therefore causes violation of any requirement of the POTW's NPDES permit or prevents the POTW from using its chosen sludge use or disposal practice.
- “Pass through” is a discharge that exits the POTWs to waters of the United States in quantities or concentrations which, alone or in conjunction with other discharges, causes a POTW NPDES permit violation.

The General Pretreatment Regulations detail the procedures, responsibilities, and requirements of EPA, states, POTWs, and IUs. All regulated entities must properly implement their part of the pretreatment program for regulatory objectives to be met. The specific responsibilities of each are explained below.

EPA has chosen to promulgate pretreatment standards at the same time it promulgates effluent limitations guidelines for industry categories of direct dischargers under CWA sections 301(b) and 304(b). These pretreatment standards 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 CWA section 307(b) in its General Pretreatment Regulations for Existing and New Sources of Pollution 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. As noted above, EPA's regulations define both pass through and interference. In addition, under the Pretreatment Regulations, certain POTWs must develop and enforce local limits to implement the general and specific prohibitions of the regulations at 40 CFR 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 Part 403.5.").

The term Publicly Owned Treatment Works or POTW means a treatment works as defined by section 212 of the CWA, which is owned by a state or municipality (as defined by section 502(4) of the CWA). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term POTW also means the municipality as defined in section 502(4) of the CWA, which has jurisdiction over the discharges to and from such a treatment works.

Many of the specific prohibitions for discharge into a POTW system found in 40 CFR 403.5(b) provide municipalities with the basis for instituting a proactive capacity, management, operation, and maintenance (CMOM) program; and protecting the collection system from degradation due to explosion, corrosion, and obstruction. If they are not yet required to implement a local pretreatment program by the terms of 40 CFR Part 403 or equivalent state law, then such municipalities should evaluate implementation of local pretreatment controls, particularly if locations of overflows such as Sanitary Sewer Overflows (SSOs) and Combined Sewer Overflows (CSOs) are predictable (based on facility history) and persistent. The regulations at 40 CFR Part 403 authorize the creation of a local pretreatment program, even if it is not required by state or federal law.

Guidance manuals developed to assist EPA Regional Offices, States, and POTWs with implementation of the National Industrial Pretreatment Program are available on EPA's NPDES Pretreatment Publications website (<https://www.epa.gov/npdes/national-pretreatment-program-events-training-and-publications#publications>). Select publications are listed in Section C, "References," of this chapter.

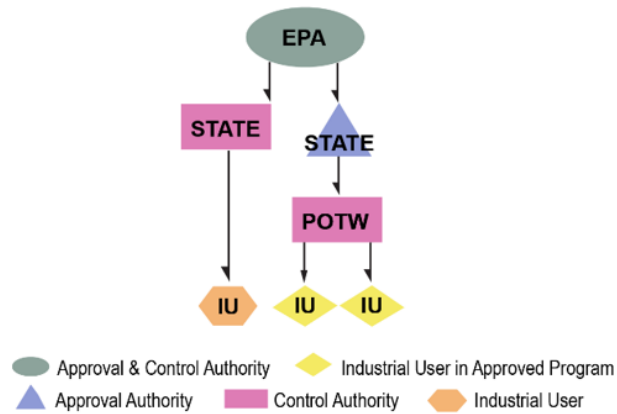
PROGRAM DEVELOPMENT AND NPDES REQUIREMENTS

The General Pretreatment Regulations at 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 also require other POTWs to implement pretreatment programs. A POTW with an approved local pretreatment program is the "Control Authority." The terms of the POTW Control Authority's NPDES permit describes its implementation and enforcement responsibilities with respect to the local pretreatment program. Failure to adequately comply

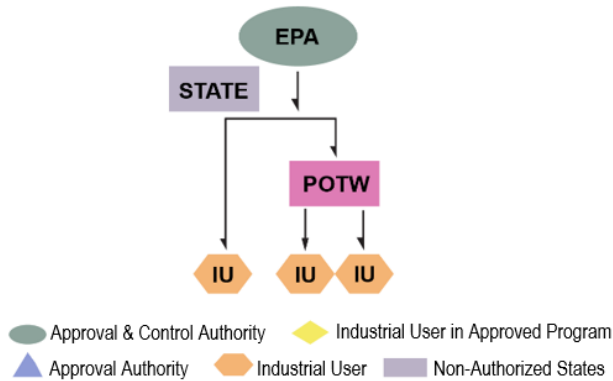
with its terms constitutes an NPDES violation that could subject the POTW to an enforcement action.

States with authority to approve local pretreatment programs are responsible for overseeing and coordinating the development and approval of these local pretreatment programs. Before state approval is obtained, EPA is the Approval Authority for local pretreatment programs. States with NPDES pretreatment programs must receive EPA authorization before they may function as Approval Authorities for pretreatment. The conditions for approval of an NPDES state pretreatment program are found at 40 CFR 403.10.

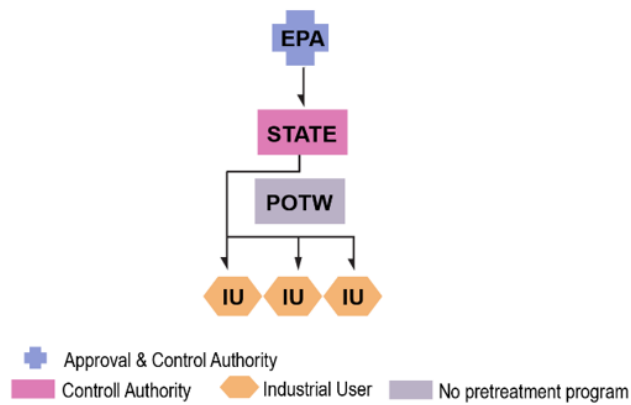
The EPA is the Approval Authority until a state is authorized to administer the pretreatment program. Once a state is authorized, the EPA maintains oversight responsibilities and enforcement authority. A state can serve as both the Approval Authority for local programs and as the Control Authority for IUs that discharge to POTWs without an approved local program. POTWs never serve as Approval Authorities. See Exhibit 9-1 for a visual representation of Control Authority and Approval Authority. Before any pretreatment inspection, the inspector should gain a clear understanding of who serves as the Approval Authority and the Control Authority in the municipality.



Authorized States



Non-Authorized States



**States Assuming Direct Responsibility
Under 40 CFR 403.10(e)**

Exhibit 9-1. Approval Authority versus Control Authority

The NPDES permit issued to a POTW that is required to develop a pretreatment program must include development and implementation requirements that become enforceable components of the permit. The General Pretreatment Regulations detail the requirements of a pretreatment program and implementation of the program. Among other things, POTWs must have the legal authority to control the contribution the POTW receives from significant industrial users (SIUs)⁵ through a permit, order or similar means that may include either general or individual control mechanisms. 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 must 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 IU 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 (40 CFR 403.8(f)(2)). At a minimum, it must include the following:

- Prohibited discharge standards, 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 penalty.
- 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 actual civil and criminal penalties 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.

⁵ The term *significant industrial user* is defined at 40 CFR 403.3(v)(1).

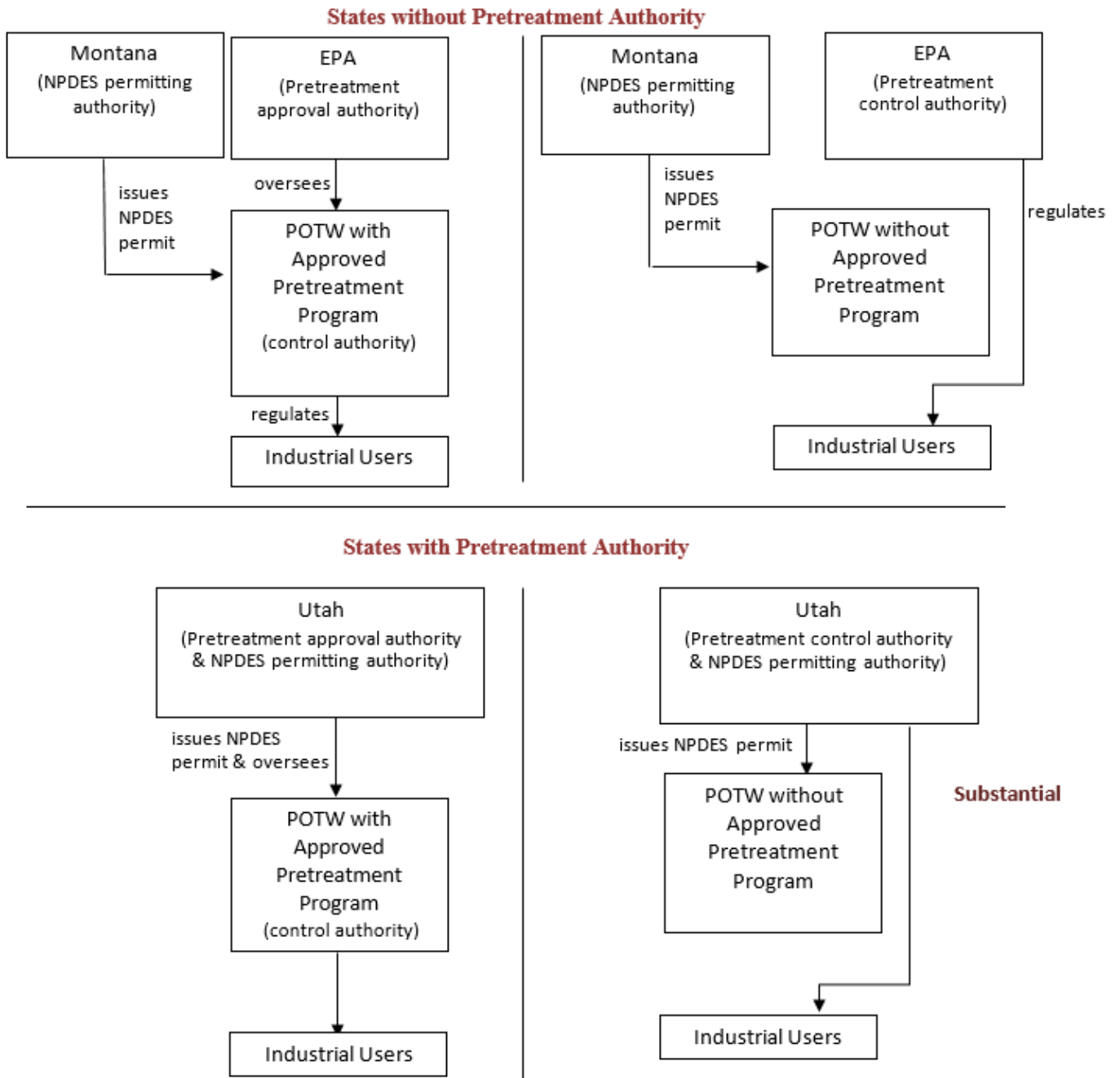


Exhibit 9-2. Pretreatment Implementation Flow Diagram

APPROVAL AUTHORITY RESPONSIBILITIES

The EPA Regional Office or an approved state administers a pretreatment program. The principal tasks for which an Approval Authority (EPA Regional Office or delegated state) is responsible are the following:

- Reviewing and approving POTW pretreatment programs and minor modifications (see "Control Authority Responsibilities" for what Control Authority program development entails).
- Overseeing POTW program implementation—i.e., conducting Pretreatment Compliance Inspections (PCIs) and audits—and reviewing annual report reviews.
- Providing POTWs with technical assistance on the requirements of the General Pretreatment Regulations, categorical pretreatment standards, and POTW pretreatment program requirements.
- Notifying POTWs of new and existing program requirements.
- Determining SIU and POTW compliance with all applicable federal requirements.
- Applying and enforcing pretreatment standards and requirements at IUs discharging to POTWs that do not have an approved local pretreatment program.
- Initiating enforcement action against noncompliant POTWs or IUs.

The General Pretreatment Regulations at 40 CFR 403.10 identify the requirements a state must meet to receive approval of the pretreatment program as part of its NPDES authority, that is, to become an Approval Authority. For states preferring to assume the responsibility of directly regulating IUs discharging to POTWs and, hence, being considered the Control Authority in lieu of POTWs within the state, 40 CFR 403.10(e) provides that option.

CONTROL AUTHORITY RESPONSIBILITIES

Before the Approval Authority approves a POTW to operate the local Authority's pretreatment program as the Control Authority, the Approval Authority (EPA or State) is the Control Authority for IUs discharging to the POTW. After program approval, the Control Authority becomes responsible for implementing the General Pretreatment Regulations (40 CFR 403.8(f)), its approved local POTW pretreatment program, and the requirements of its NPDES permit. Note the POTW must comply with its NPDES permit regardless of program approval. To fully implement the pretreatment program throughout the entire service area, the Control Authority has responsibilities related to several specific areas:

- As provided in 40 CFR 403.8(f)(1), the Control Authority must have the legal authority to:
 - Deny (or condition) any new or increased contribution to the POTW from each IU.
 - Require IUs to comply with applicable pretreatment standards and requirements.
 - Require development of compliance schedules for the installation of technology necessary to meet pretreatment standard.

- Control through permit, order, or similar means the contribution of each IU to ensure compliance with applicable pretreatment requirements.
- Require submission of notices and self-monitoring reports as necessary to assure IU compliance and carry out all required inspections, surveillance, and monitoring necessary to determine industrial user compliance.
- Enter premises of IUs to assure compliance.
- Obtain remedies for noncompliance including seeking injunctive relief for noncompliance; Seeking or assessing civil or criminal penalties of at least \$1,000 a day per violation; Immediately halting a discharge that presents or appears to present an imminent endangerment to the health or welfare of persons or to the environment or that threatens to interfere with the POTW's operation.
- Comply with confidentiality requirements.
- Develop and enforce an adequate sewer use ordinance, and if necessary, interjurisdictional agreements.
- As provided in 40 CFR 403.8(f)(2) and 403.5(c), the Control Authority must develop and implement procedures to ensure compliance with pretreatment standards including:
 - Identify and locate all possible IUs that may be subject to the pretreatment program.
 - Identify the character and volume of pollutants contributed to the POTW.
 - Notify all IUs of appropriate pretreatment standards, any changes to the regulations, and applicable requirements of the Resource Conservation and Recovery Act (RCRA).
 - Update the industrial survey to identify new IUs that should be regulated by the Control Authority's pretreatment program, and identify changes in manufacturing processes and wastewater discharge characteristics at existing facilities.
 - Identify categorical IUs that qualify as non-significant categorical IUs or middle tier IUs and determine appropriate permitting and monitoring requirements if state and local legal authority allows the control authority to make such designations.
 - Maintain a list of SIUs and submit updates to the Approval Authority annually.
- As provided in 40 CFR 403.8(f)(2), to ensure IU compliance, the Control Authority must:
 - Establish reporting, inspection, and monitoring requirements and procedures to enable evaluation of compliance, including proper QA/QC and chain-of-custody procedures for sampling and analysis.
 - Inspect and sample IUs. At a minimum, SIUs must be sampled and inspected at least once a year.
 - Evaluate each SIU at least once for the need for a slug discharge control program.
 - Perform sampling and analysis in a manner to produce evidence admissible in enforcement proceedings or in judicial actions.
 - Develop and implement an Enforcement Response Plan to guide compliance evaluation and enforcement activities.

- Evaluate industry compliance by reviewing and analyzing industrial user self-monitoring reports and Control Authority monitoring data.
- Investigate instances of noncompliance.
- Initiate appropriate enforcement action to bring users into compliance.
- Establish other procedures as required and/or determined to be needed to regulate the SIUs discharging to the POTW.
- As provided in 40 CFR 403.8(f)(2)(viii), the Control Authority must develop and implement procedures to comply with public participation requirements of EPA regulations, including:
 - Develop and implement a procedure to evaluate IUs that are in significant noncompliance as defined in 40 CFR 403.8(f)(2)(vii).
 - Publish at least annually, in the local newspaper with the greatest circulation, a list of the IUs that were in significant noncompliance within the past 12 months.
 - Notify the public of any changes to the sewer use ordinance or local limits after approval by the Approval Authority.
 - Submit substantial pretreatment program modifications to the Approval Authority and notify the Approval Authority of non-substantial modifications.
- Data management:
 - Maintain records of pertinent industrial user activities and compliance status, including compliance with Best Management Practices (BMP) requirements.
 - Maintain a current understanding of the categorical pretreatment standards and General Pretreatment Regulations, and notify IUs of any changes.
 - Provide the Approval Authorities with any reports required.
- As provided in 40 CFR 403.8(f)(3), the Control Authority must:
 - Provide adequate resources and qualified personnel for program implementation.

INDUSTRY RESPONSIBILITIES

Industrial dischargers to POTWs must comply with the following:

- Prohibited Discharge Standards—The general and specific prohibited discharge standards (40 CFR 403.5) noted in Table 9-1 and any specific local limits required to implement the prohibitions.
- Appropriate Pretreatment Standards—Categorical pretreatment standards (40 CFR Parts 405–471), state requirements.
- Reporting Requirements—As required by 40 CFR 403.12 or 403.3, and/or by the Control Authority. The requirements provided in 40 CFR 403.12 are summarized in Table 9-1.
- POTW Requirements—As specified in the approved POTW’s legal authority.

The categories for which the EPA has developed categorical pretreatment standards are listed in Table 9-2. IUs that meet a pretreatment standard's applicability are considered categorical IUs. Categorical pretreatment standards are national, uniform, technology-based standards that apply to dischargers to POTWs from specific industrial categories (i.e., indirect dischargers). They are designed to prevent the discharge of pollutants that pass through, interfere with, or are otherwise incompatible with the operation of POTW. Dischargers subject to categorical pretreatment standards are required to comply with those standards by a specified date, typically no more than three years after the effective date of the categorical standard. EPA develops these standards at the same time it is developing effluent limitations guidelines for specific industry categories and typically, like effluent limitations. These categorical pretreatment standards apply to the wastewaters from specific manufacturing processes. The standards apply at the point of discharge from the pretreatment unit for the regulated process, or if there is no pretreatment unit, they apply at the end of the regulated process.

As previously noted, EPA has also developed national pretreatment standards that apply to all indirect dischargers that include general prohibitions (i.e., no pass through or interference) and specific prohibitions (e.g., no introduction of pollutants that create a fire hazard). To protect the POTW system from interference, pass through, and sludge contamination or any of the specific prohibitions, the Control Authority must develop and enforce local limits to control the introduction of such pollutants. These local limitations are generally applied at the point where the industrial facility discharges to the POTW.

Where there is both a categorical pretreatment standard and local limit applied over the same time period (e.g., both daily maximum limits), a categorical industrial user must meet the categorical pretreatment standard or the local limit for each pollutant regulated, whichever is the more stringent. The point at which the Control Authority's local limit applies may differ from the point at which the categorical pretreatment standard applies. In this case, the control authority must either calculate an adjustment to the categorical pretreatment standard to compare it to the local limit or sample at both points to determine compliance with both the categorical pretreatment standards and local limits.

When evaluating the pretreatment standards to determine the appropriate limitation, the inspector should understand that different categorical pretreatment standards are developed for each type of industry. If the industry combines the flows from more than one regulated process or combines a regulated process flow with other flows before these wastes are treated, the Control Authority and the industry must adjust the categorical pretreatment standard using the Combined Wastestream Formula (CWF). The equation is provided in 40 CFR 403.6(e) of the General Pretreatment Regulations. If the wastewaters are mixed after treatment, the categorical pretreatment standards must still be adjusted, in this case by flow weighted averaging of all flows introduced prior to the sample point. In either case, the resulting alternative limit cannot be set below the level of detection for that pollutant. Additional information on the combined wastestream formula and the flow weighted averaging formula is provided in EPA's *Guidance Manual for Implementing Production-Based Pretreatment Standards and the Combined Wastestream Formula* (EPA, 1985) available at <https://www3.epa.gov/npdes/pubs/owm0260.pdf>.

Categorical IUs have specific reporting requirements as per 40 CFR 403.12 and the respective categorical standard regulation. A summary of the reports that categorical industries are required to submit is provided in Table 9-1. A Control Authority may require additional reports from all IUs discharging to the system, including categorical IUs. A control authority may reduce sampling and reporting requirements for facilities that meet the definition of non-significant categorical IUs or middle-tier categorical IUs established by the pretreatment streamlining rule.

Table 9-1. Summary of the General Pretreatment Regulations

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| 403.1 | Purpose and Applicability |
| 403.2 | Objectives of General Pretreatment Regulations |
| 403.3 | Definitions |
| 403.4 | State or Local Law |
| | The Federal General Pretreatment Regulations are not meant to affect any state or local regulatory requirements as long as these requirements are at least as stringent as the federal regulations. |
| 403.5 | National Pretreatment Standards: Prohibited Discharges |
| | This section specifies general and specific prohibited discharge standards that Control Authorities must incorporate into their pretreatment programs. The general prohibitions specify that pollutants introduced into POTWs by a nondomestic source shall not pass through the POTW or interfere with the operation or performance of the works. The section provides that Control Authorities required to develop local pretreatment programs and POTWs where interference and pass through are likely to recur develop and enforce specific limitations (local limits, including Best Management Practices) to implement the general prohibitions against interference, pass through, and sludge contamination. |
| | The specific prohibitions specify prevention of discharge of pollutants that cause any of the following at the POTW: |
| | <ul style="list-style-type: none"> • Fire or explosion hazard, including no discharge with a closed-cup flashpoint of less than 60°C (140°F) using test methods in 40 CFR 261.21. • Corrosive structural damage (no pH<5.0). • Obstruction to the flow in the POTW. • Interference. |
| | <ul style="list-style-type: none"> • Heat causing inhibition of biological activity and temperatures at the POTW treatment plant to exceed 40°C (104°F). • Petroleum oils, non-biodegradable cutting oils, or products of mineral oils in amounts that will cause interference or pass through. • Fume toxicity or reactivity. • Trucked or hauled pollutants except at designated discharge points. |

Table 9-1. Summary of the General Pretreatment Regulations

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| | Additionally, IUs are provided with an affirmative defense (if specified conditions are met) for actions brought against them for alleged violations of the general or specific prohibitions contained in this section. |
| 403.6 | National Pretreatment Standards: Categorical Standards |
| | This section discusses development and implementation of categorical pretreatment standards including, but not limited to, compliance deadlines, concentrations and mass limits, prohibition of dilution as a substitute treatment, and the Combined Wastestream Formula (CWF) to determine discharge limitations. |
| 403.7 | Revision of Categorical Pretreatment Standards to Reflect POTW Removal of Pollutants |
| | This section (referred to as the removal credits provision) provides the criteria and procedures to be used by a POTW in revising the pollutant discharge limits specified in categorical pretreatment standards to reflect removal of pollutants by the POTW. |
| 403.8 | Pretreatment Program Requirements: Development & Implementation by POTW |
| | This section covers the requirements for pretreatment program development by a Control Authority. Included in this section are criteria for determining which POTWs must develop pretreatment programs, incorporation of approved programs and compliance schedules into NPDES permits, deadlines for program approvals, and program and funding requirements. 403.8(f) sets out the requirements for an approvable POTW program. Specifically, it requires, among other things, that the Control Authority must have sufficient legal authority to enforce the approved pretreatment program that must include either individual industrial user control mechanisms such as a permit as well as, in certain cases, general control mechanisms for groups of similar IUs. The section also discusses that all Control Authorities with approved programs, or programs under development, must develop and implement procedures to ensure compliance with the requirements of a pretreatment program (which includes annual inspection and sampling requirements and the definition of SNC). |
| 403.9 | Control Authority Pretreatment Programs and/or Authorization to Revise Pretreatment Standards: Submission for Approval |
| | This section discusses requirements and procedures for submission and review of Control Authority pretreatment programs. Included in this section are discussions of conditional program approval, approval authority action, and notification where submissions are defective. |
| 403.10 | Development and Submission of NPDES State Pretreatment Programs |
| | This section discusses requirements and procedures for submission and review of NPDES state pretreatment programs. Included in this section are discussions of approvals and deadlines for state programs, legal authority, program and funding requirements, and contents of program submissions. |
| 403.11 | Approval Procedures for Control Authority Pretreatment Programs and Revision of Categorical Pretreatment Standards |

Table 9-1. Summary of the General Pretreatment Regulations

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| | <p>This section provides the administrative procedures for the review and approval or denial of Control Authority pretreatment program submissions and requests for removal credit authority.</p> |
| 403.12 | <p>Reporting Requirements for POTWs and IUs</p> |
| | <p>This section presents reporting requirements for Control Authorities and IUs. Reports required by IUs include the following:</p> <ul style="list-style-type: none"> • Baseline Monitoring Report (BMR). Due to the Control Authority within 180 days of the effective date of the categorical pretreatment standards (40 CFR 403.6). In addition, new source BMR reporting requirements are discussed in this section. • Compliance schedule progress reports. Due to the Control Authority within 14 days of completion of compliance schedule milestones or due dates. • 90-day compliance report. Due to the Control Authority within 90 days of the compliance date of the categorical standards or 90 days after beginning discharge for a new source. • Periodic reports on continued compliance. Due to the Control Authority at least semiannually, usually in June and December after the compliance date. The Control Authority may waive monitoring requirements if specified conditions are met. • Notices of potential problems including slug loadings. Due to the Control Authority immediately upon identification of discharges, including slug loadings that could cause problems to the POTW for both non-categorical and categorical IUs. • Notice of changed discharge. Due to the Control Authority from categorical and non-categorical users in advance of any significant change in volume or character of pollutants discharged. • Notice of violation and resampling. Notification due to the Control Authority within 24 hours of noting a violation; results of resampling due within 30 days. • Notification of hazardous waste discharge. Notification to the POTW, EPA, and state Hazardous Waste authorities of the hazardous wastes discharges to the POTW. <p>Reports required from Control Authorities include the following:</p> <ul style="list-style-type: none"> • Compliance schedule (for development of pretreatment programs) progress reports • Annual POTW reports to the Approval Authority. • Annual certification by Non-Significant Categorical IUs. <p>This section also discusses in detail the monitoring requirements for IUs and signatory and recordkeeping requirements (including requirements for electronic documents) for Control Authorities and IUs.</p> |

Table 9-1. Summary of the General Pretreatment Regulations

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| 403.13 | Variations from Categorical Pretreatment Standards for Fundamentally Different Factors |
| | This provision allows an industrial user, POTW or any interested person, to request a variance for the establishment of limits either more or less stringent than that required by a categorical pretreatment standard. The primary criterion required for approval of this variance is that the factors relating to the industrial user's discharges be fundamentally different from factors considered by EPA in establishing categorical pretreatment standards for these discharges. |
| 403.14 | Confidentiality |
| | This section covers confidentiality requirements and prohibitions for EPA, states, and Control Authorities. Effluent data are available to the public without restriction. |
| 403.15 | Net/Gross Calculation |
| | This provision provides for adjustment of categorical pretreatment standards to reflect the presence of pollutants in the industrial user's intake water. |
| 403.16 | Upset Provision |
| | This provision is consistent with the NPDES regulations and allows an upset of an industry's pretreatment system (which meets the conditions of an upset as specified in this provision) to be an affirmative defense to an action brought for noncompliance with categorical pretreatment standards. The industrial user shall have the burden of proof for such a defense. |
| 403.17 | Bypass |
| | This provision requires IUs to operate their treatment systems at all times and includes criteria for allowing a bypass to occur and notification procedures for both an anticipated and unanticipated bypass. |
| 403.18 | Modification of Control Authority Pretreatment Programs |
| | This provision specifies procedures and criteria for "minor" and "substantial" modifications to approved Control Authority pretreatment programs and incorporation of substantial modifications into the Control Authority. |
| 403.19 | Provisions of specific applicability to the Owatonna Waste Water Treatment Facility |
| | This section provides specific regulatory requirements for the Owatonna Waste Water Treatment Facility and its participating IUs to implement a project under the Project XLC program in Steele County, Minnesota. This project includes legal authorities and requirements that are different than the administrative requirements otherwise specified in 40 CFR Part 403. |
| 403.20 | Pretreatment Program Reinvention Pilot Projects Under Project XL |
| | This section provides administrative procedures to allow any POTW with a final "Project XL" agreement to implement a Pretreatment Program that includes legal authorities and |

Table 9-1. Summary of the General Pretreatment Regulations

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| | requirements that are different than the administrative requirements otherwise specified in 40 CFR Part 403. |
| Appendix A | [Reserved] |
| Appendix B | [Reserved] |
| Appendix C | [Reserved] |
| Appendix D | Selected Industrial Subcategories Considered Dilute for Purposes of the Combined Wastestream Formula (previously titled "Selected Industrial Subcategories Exempted from Regulation Pursuant to Paragraph 8 of the NRDC v. Costle Consent Decree" |
| | The Appendix D published on January 21, 1981, provided a list of industrial subcategories that had been exempted (pursuant to paragraph 8 of the NRDC vs. EPA Consent Decree) from regulation by categorical pretreatment standards. Appendix D was revised on October 9, 1986, to update the list of exempted industrial categories and to correct previous errors by either adding or removing various subcategories or by changing the names of some categories or subcategories. Each of the subcategories, as indicated by the revised Appendix D title, contains wastestreams that are classified as dilute for purposes of applying categorical pretreatment standards to other wastestreams and for using the combined wastestream formula to adjust these standards. |
| Appendix E | Sampling Procedures |
| | This Appendix provides a general description of composite and grab sampling procedures. |
| Appendix F | [Reserved] |
| Appendix G | Pollutants Eligible for a Pollutant Credit |

Table 9-2. Categorical Pretreatment Standards

| Industrial Categories with Categorical Pretreatment Standards in Effect | | | Effluent Guidelines Currently Under Development ^a |
|---|---|---|---|
| | N | Aluminum Forming (Part 467) | <ul style="list-style-type: none"> • Steam Electric Power Generation • Shale Gas Extraction • Dental Amalgam |
| E | N | Battery Manufacturing (Part 461) | |
| E | N | Builder's Paper and Board Mills (Part 431) | |
| E | N | Carbon Black Manufacturing (Part 458) | |
| E | N | Centralized Waste Treatment (Part 437) | |
| | N | Coil Coating (Part 465) | |
| E | N | Copper Forming (Part 468) | |
| | N | Duck Operations (Part 412) | |
| E | N | Electrical and Electronic Components (Part 469) | |
| E | N | Electroplating (Part 413) | |
| | N | Fertilizer Manufacturing (Part 418) | |
| | N | Glass Manufacturing (Part 426) | |
| | N | Grain Mills Manufacturing (Part 406) | |

Table 9-2. Categorical Pretreatment Standards

| Industrial Categories with Categorical Pretreatment Standards in Effect | | Effluent Guidelines Currently Under Development ^a |
|---|--|--|
| | N Ink Formulating (Part 447) | |
| E | N Inorganic Chemicals (Part 415) | |
| E | N Iron and Steel Manufacturing (Part 420) | |
| E | N Leather Tanning and Finishing (Part 425) | |
| E | N Metal Finishing (Part 433) | |
| E | N Metal Molding and Casting (Part 464) | |
| E | N Nonferrous Metals Forming and Metal Powders (Part 471) | |
| E | N Nonferrous Metals Manufacturing (Part 421) | |
| E | N Organic Chemicals, Plastics, and Synthetic Fibers (Part 414) | |
| | N Paint Formulating (Part 446) | |
| E | N Paving and Roofing Materials (Part 443) | |
| E | N Pesticide Chemicals (Part 455) | |
| E | N Petroleum Refining (Part 419) | |
| E | N Pharmaceutical Manufacturing (Part 439) | |
| E | N Porcelain Enameling (Part 466) | |
| | N Pulp, Paper, and Paperboard (Part 430) | |
| | N Rubber Manufacturing (Part 428) | |
| E | N Soap and Detergent Manufacturing (Part 417) | |
| E | N Steam Electric Power Generating (Part 423) | |
| E | N Timber Products Processing (Part 429) | |
| E | N Transportation Equipment Cleaning (Part 442) | |
| | N Waste Combustors (Part 444) | |

E = Standards in effect for existing sources.

N = Standards in effect for new sources.

^a From 2010 final Effluent Guidelines Program Plan (October 2011).

B. PRETREATMENT COMPLIANCE INSPECTIONS AND OTHER COMPLIANCE EVALAUTION ACTIVITIES

SCOPE OF PCIS AND AUDITS

The Pretreatment Compliance Inspection (PCI), the pretreatment program audit, and the program performance report (submitted at least annually by the Control Authority) are tools EPA and state officials use to assess the Control Authority's pretreatment program.

EPA uses the PCI to evaluate Control Authority compliance monitoring and enforcement activities. The inspector also determines whether any changes have been made to the Control Authority program since the last PCI, audit, performance report (i.e., annual report), or Control Authority modification request for approval. Further, the inspector collects information on Control Authority program implementation for further evaluation by compliance personnel.

The inspector may conduct the PCI in conjunction with other NPDES inspections to conserve travel resources and allow integration of information on a POTW's operations. PCIs can be

conducted along with Compliance Evaluation Inspections (CEIs), Compliance Sampling Inspections (CSIs), Performance Audit Inspections (PAIs), Diagnostic Inspections (DIs), and other non-routine inspections, such as Toxics Sampling Inspections, and Compliance Biomonitoring Inspections. The inspector may combine a PCI with a site visit regarding sludge compliance as discussed in Chapter 10.

Note that the POTW personnel involved in a CSI may be different from the ones involved in a PCI. Also, PCIs and audits rely heavily on file and record reviews to evaluate the Control Authority's pretreatment program. These records may have little bearing on the sampling inspection of the treatment facility. This distinction of a PCI to a CSI should be addressed during planning for the inspection.

Audits provide a comprehensive review of the Control Authority pretreatment program. The audit addresses all the items covered in a PCI, but in greater detail. Consequently, the audit is more resource intensive than the PCI. Additionally, the pretreatment audit is generally considered to be a program function and it is not the focus of this Chapter. More information about how to conduct pretreatment compliance audits is available at https://www3.epa.gov/npdes/pubs/final_pca_checklist_and_instructions_%20feb2010.pdf.

In general, there are three major components of a PCI:

- Pre-visit preparation for the PCI:
 - Coordination with the EPA Regional or State Pretreatment Coordinator.
 - Review of background information: approved program documentation, Control Authority annual reports (if available), NPDES permit/NPDES permit fact sheet, NPDES permit compliance status, previous inspection reports, and program modification requests from the Control Authority.
 - Notification of Control Authority (if appropriate).
- On-site:
 - Entry (presenting credentials)
 - Opening conference with Control Authority officials
 - Review of pretreatment files
 - IU site visits (as appropriate)
 - Interview of officials using PCI or audit checklist
 - Tour of POTW (optional)
 - Closing conference
- Follow-up:
 - Preparation of report
 - Data entry into ICIS-NPDES
 - Reportable Noncompliance/Significant Noncompliance (RNC/SNC) determination
 - Follow-up letter to the Control Authority

- Enforcement action (when necessary)
- NPDES permit or program modifications (when necessary)

EPA's *Clean Water Act National Pollutant Discharge Elimination System Compliance Monitoring Strategy* (CMS) (EPA, 2014) describes the off-site desk audit as a compliance monitoring activity that regions and states can use, under certain circumstances, to make a compliance determination. In order for the off-site desk audit to count toward CMS implementation, the region or state must report the activity to ICIS-NPDES and the desk audit must be conducted by an authorized inspector or other credible regulator with sufficient knowledge, training or experience to assess compliance. The off-site desk audit may include, but is not limited to, the following activities:

- Review of POTW permit, reports and records, including annual pretreatment reports and annual biosolids reports for years covering the period since the last PCI or audit.
- Review of agency-gathered testing, sampling and ambient monitoring data.
- Evaluation of responses to CWA section 308 information requests, such as IU self-monitoring reports.
- Consideration of other information to identify any unpermitted IUs or mis-categorized IUs.
- Consideration of the POTW's sewer use ordinance and enforcement response policy.
- Review of compliance deliverables submitted pursuant to permits or enforcement actions.
- Analysis of aerial or satellite images.

If a PCI is conducted with an unannounced NPDES inspection, it also may be unannounced, but the Control Authority officials should be notified of the PCI upon arrival of the inspection team. At many POTWs, personnel responsible for implementing the pretreatment program may not be the same as those operating the treatment plant.

The protocol involved in the on-site portion of the inspection is comparable to that of other NPDES inspections. The Pretreatment Program PCI typically includes site visits of industrial facilities discharging to the POTW. The inspector should select IUs for site visits as needed to evaluate the Control Authority's procedures for properly categorizing, monitoring and inspecting IUs. For more detailed information on conducting PCIs, refer to EPA's *Guidance for Conducting a Pretreatment Compliance Inspection* (EPA, 1991a).

PCI CHECKLIST COMPONENTS AND INSPECTION REPORT

EPA developed the PCI checklist to assist NPDES inspectors in conducting and documenting the PCI. However, it should be noted that the checklist in the 1991 PCI guidance has not been updated to evaluate changes in the regulations as a result of the 2007 Pretreatment Streamlining Rule. EPA pretreatment inspectors may find EPA's *Control Authority Pretreatment Audit Checklist and Instructions* (EPA, 2010) helpful for conducting pretreatment inspections. See the next section for a description of this checklist.

In addition to the completed checklist, the inspector may include other materials collected during the PCI in the final report as appendices, such as:

- Example of Control Authority control mechanism or enforcement actions
- Names of IUs that were not sampled or inspected in the past year
- Control Authority's Enforcement Response Plan
- Annual list of IUs in significant noncompliance

See the EPA's *Guidance for Conducting a Pretreatment Compliance Inspection* (EPA, 1991a) for the PCI checklist. The manual goes through each checklist section individually and explains the intent of the questions. As noted earlier, the manual provides more detailed information concerning the procedures for conducting the PCI.

PRETREATMENT AUDIT CHECKLIST COMPONENTS

The audit checklist has been developed to assist with a detailed review of a POTW pretreatment program, including pretreatment program modification, legal authority, industrial user characterization, control mechanism evaluation, application of pretreatment standards and requirements, compliance monitoring, enforcement, data management/public participation, resources, and environmental effectiveness/pollution prevention. The audit checklist is part of the *Control Authority Pretreatment Audit Checklist and Instructions* (EPA, 2010). The manual provides specific guidance on conducting an audit and using the checklist.

The audit checklist is divided into the following sections:

- Section I: Data Review
- Section II: File Evaluation
- Section III: Observations and Concerns
- Attachment A: Pretreatment Program Status Update
- Attachment B: Pretreatment Program Profile
- Attachment C: Legal Authority Review Checklist
- Industrial User Site Visit Data Sheet
- WENDB Data Entry Worksheet;
- Pretreatment Compliance Audit Required ICIS Data Elements Worksheet
- RNC Worksheet.

Inspectors should note that the 2010 audit checklist includes the WEN database entry worksheet; however, the WEN database is no longer utilized. Inspectors should now enter audit information into the ICIS-NPDES database and may use the ICIS-NPDES Data Entry Worksheet to do so.

The audit checklist collects more detailed information than the PCI checklist and, as with the completed PCI checklist, also may be augmented by additional audit data:

- NPDES pretreatment permit conditions.

- Control Authority enforcement documents with pretreatment requirements (i.e., administrative order, consent decree).
- Locally developed discharge limitations as included in the approved program (or any limits that have been changed by the Control Authority).
- Copy of sewer use ordinance if different from that in the approved program.
- Control Authority sampling and inspection schedule for regulated IUs.
- List of IUs not sampled or inspected in the past year.
- Control Authority chain-of-custody form.
- List of noncompliant IUs and history of enforcement actions taken.
- Annual list of IUs in significant noncompliance.

C. REFERENCES

EPA's *Guidance for Conducting a Pretreatment Compliance Inspection* (September 1991) contains a list of reference materials (publications and memoranda) available from EPA or the Pretreatment Coordinator in your region. These documents and additional guidance manuals developed to assist EPA Regional Offices, states, POTWs, and IUs with implementation of the General Pretreatment Program are available on EPA's NPDES Pretreatment Publications website (<https://www.epa.gov/npdes/national-pretreatment-program#overview>https://cfpub.epa.gov/npdes/pubs.cfm?program_id=3).

Checklists for conducting pretreatment compliance inspections and audits are provided in EPA's *Guidance for Conducting a Pretreatment Compliance Inspection* (EPA, 1991a) and *Control Authority Pretreatment Audit Checklist and Instructions* (EPA, 2010). It should be noted that these checklists have not been updated to evaluate changes in the regulations as a result of the 2007 Pretreatment Streamlining Rule. Each checklist provides a list of questions that should be considered during an audit or PCI. The inspector should contact the Regional or State Pretreatment Coordinator before a PCI or an audit is done.

The following is a list of resources providing additional information on the NPDES pretreatment program.

Memoranda

Determining Industrial User Significant Noncompliance (January 17, 1992).

Determining Industrial User Compliance Using Split Samples (January 21, 1992).

Use of Grab Samples to Detect Violations of Pretreatment Standards (October 1, 1992).

Using Split Samples to Determine Industrial User Noncompliance (April 12, 1993).

Information on the Misuse of Sodium Dimethyldithiocarbamate (June 2, 2000).

Regulatory Determination for the PreKote™ Surface Preparation Process (April 1, 2003).

Product and Product Group Discharges Subject to Effluent Limitations and Standards for the Organic Chemicals, Plastics, and Synthetic Fibers Point Source Category—40 CFR Part 414 (April 2005).

New Source Dates for Direct and Indirect Dischargers (September 28, 2006).

Oversight of SIUs Discharging to POTWs without Approved Pretreatment Programs (May 18, 2007).

Applicability of Effluent Guidelines and Categorical Pretreatment Standards to Biodiesel Manufacturing (August 11, 2008).

Best Practices for NPDES Permit Writers and Pretreatment Coordinators to Address Toxic and Hazardous Chemical Discharges to POTWs (November 3, 2016)

EPA Guidance

U.S. Environmental Protection Agency. (1983). *Guidance Manual for POTW Pretreatment Program Development*. EPA 833/B-83-100.

U.S. Environmental Protection Agency. (1985). *Guidance Manual for Implementing Production-Based Pretreatment Standards and the Combined Wastestream Formula*. EPA 833-B-85-201.

U.S. Environmental Protection Agency. (1991a). *Guidance for Conducting a Pretreatment Compliance Inspection*. EPA300/R-92-009.

U.S. Environmental Protection Agency. (1991b). *Control of Slug Loadings to POTWs: Guidance Manual*. 21 W-4001.

U.S. Environmental Protection Agency. (1992). *Guidance to Protect POTW Workers from Fume Toxic and Reactive Gases and Vapors*. EPA 812-B-92-001.

U.S. Environmental Protection Agency. (1994a). *Industrial User Inspection and Sampling Manual for POTWs*. EPA 831-B-94-001.

U.S. Environmental Protection Agency. (1994b). *Multijurisdictional Pretreatment Programs Guidance Manual*. EPA 833-94-005.

U.S. Environmental Protection Agency. (1999). *Guidance Manual for Control of Wastes Hauled to Publicly Owned Treatment Works*. EPA 833-B-98-003.

U.S. Environmental Protection Agency. (2004a). *Local Limits Development Guidance*. EPA 833-R-04-002A.

U.S. Environmental Protection Agency. (2004b). *Mercury Pollutant Minimization Program Guidance*. Region 5, NPDES Programs Branch.

U.S. Environmental Protection Agency. (2007a). *EPA Model Pretreatment Ordinance*. EPA 833-B-06-002.

U.S. Environmental Protection Agency. (2007b). *Checklist – Pretreatment Program Legal Authority Reviews*.

U.S. Environmental Protection Agency. (2010). *Control Authority Pretreatment Audit Checklist and Instructions*. EPA 833-B-10-001.

U.S. Environmental Protection Agency. (2011a). *Introduction to the National Pretreatment Program*. EPA 833-B-11-001.

U.S. Environmental Protection Agency. (2011b). *Procuring Analytical Services: Guidance for Industrial Pretreatment Programs*. EPA 833-B-11-001.

U.S. Environmental Protection Agency. (2012). *Industrial User Permitting Guidance Manual*. 833-R-12-001A.

U.S. Environmental Protection Agency. (2014). *Clean Water Act National Pollutant Discharge Elimination System Compliance Monitoring Strategy*. Available at:
<https://www.epa.gov/compliance/clean-water-act-national-pollutant-discharge-elimination-system-compliance-monitoring>