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UNDERSTANDING THE INDUSTRIAL PRETREATMENT PERMIT PROCESS

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Outline

- Overview of the SNC Initiative
- Need for Pretreatment Program
- Regulatory Background
 - Clean Water Act (CWA)
 - Pretreatment regulations
- Pretreatment Standards
 - Prohibited Discharge
 - Effluent Guidelines/Categorical Standards
 - Local Limits
- Program Implementation
 - Legal Authority
 - IU surveys
 - Permits – Phase I, II & III
 - Inspections/Sampling
 - Enforcement
 - Program Management
 - Reporting
 - Audits

USEPA SIGNIFICANT NON-COMPLIANCE (SNC) INITIATIVE



SNC Initiative – Objective

- Improve surface water quality and reduce potential impacts on drinking water supplies by ensuring all NPDES permittees comply with their permits
- Use a new baseline in 2020 to reduce the 20.3% SNC baseline limit from FY 2018

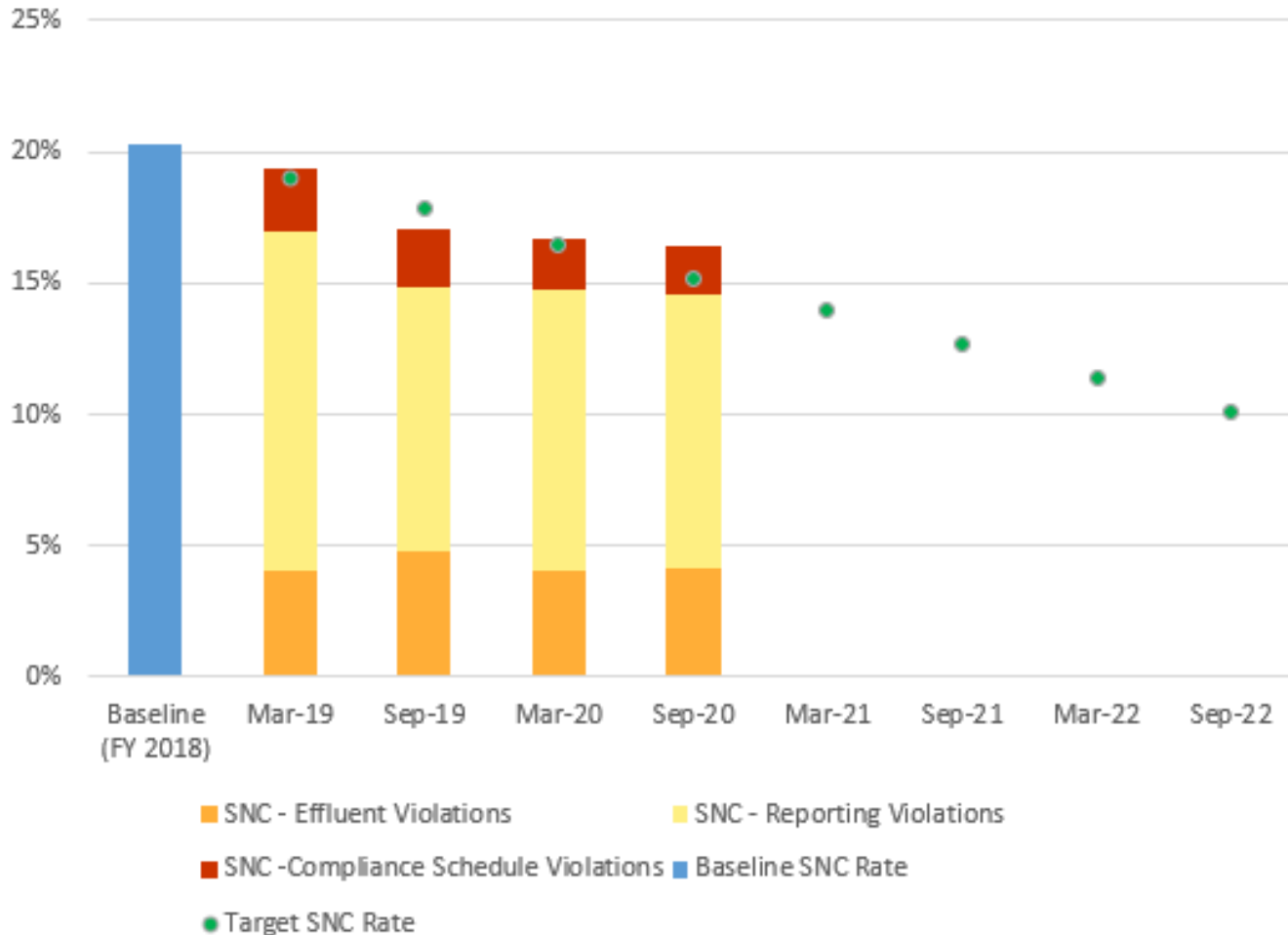
NON-COMPLIANCE

SNC Initiative – Actions

- The initial year for implementation (FY 2020):
 - Reduced the SNC rate from a FY 2018 baseline of 20.3% to 16.4% at the end of FY 2020
 - Coordinated a national symposium where best practices and strategies for reducing SNC were shared
 - Held 12 technical assistance webinars focused on problems at small, public wastewater facilities in SNC
 - Established a “Circuit Rider” technical assistance program for small systems
 - Developed tools for early detection of SNC allowing EPA and states to intervene earlier to bring back to compliance
 - Worked closely with several states to improve transfer of data from state systems to EPA’s system

[National Compliance Initiative: Reducing Significant Non-Compliance with National Pollutant Discharge Elimination System \(NPDES\) Permits | Enforcement | US EPA](#)

Progress in Achieving 50% SNC Rate Reduction Goal



Enforcement Actions

- EPA addressed serious violations through enforcement actions
- In September 2020, EPA and DOJ announced a settlement with Churchill Downs Louisiana Horseracing Company
- Settlement will resolve years of CWA violations at its New Orleans racetrack
- The Fair Grounds will eliminate unauthorized discharges of manure, urine, and process wastewater through operational changes and construction projects at an estimated cost of \$5,600,000
- The company will also pay a civil penalty of \$2,790,000, the largest amount ever paid by a concentrated animal feeding operation in a CWA matter

[Churchill Downs Louisiana Horseracing Company, LLC, Clean Water Act Settlement | Enforcement | US EPA](#)

Need for Pretreatment Program

- POTWs are designed to treat conventional pollutants
 - BOD, TSS, Fecal Coliform, pH, Oil & Grease
- Commercial and Industrial facilities discharge toxic/non-conventional pollutants
 - Can have damaging effect on the operations of the POTW
 - Can be eliminated if the facility treats wastewater prior to discharge (pretreatment)
- The National Pretreatment Program (40 CFR Part 403) provides regulatory basis to require nondomestic dischargers to comply with pretreatment standards

REGULATORY BACKGROUND



Clean Water Act Implementation

- Became law on October 18, 1972
- Goal: to restore and maintain the chemical physical and biological integrity of the nation's waters
- Established industry-specific technology-based effluent limitations
- Established NPDES permitting:
 - Control discharges from point sources
 - Implement industrial technology-based standards for direct dischargers
 - Implement categorical pretreatment standards for indirect dischargers
- Late 1973, established general prohibitions against treatment plant *interference* and *passthrough*, and set pretreatment standards for incompatible pollutants from specific industrial groups.

General Pretreatment Regulations (GPR) 40CFR 403

- Created in 1975 and implemented on June 26, 1978. Regulations have been revised numerous times since 1978
- Most recent revision promulgated under the pretreatment streamlining rule (November 2005)
- Regulated discharge of 65 categories of pollutants comprising 126 priority pollutants from 21 industrial categories
- EPA regulates the set of chemical pollutants and has published analytical test methods. These pollutants fall into two categories:
 - Metals
 - Toxic Organics
 - Solvents
 - Pesticides
 - Dioxins
 - PCBs
- The current list of 126 priority pollutants is available at <http://water.epa.gov/scitech/methods/cwa/pollutants.cfm>

Industrial Users

- GPR apply to all nondomestic sources that introduce pollutants into a POTW, commonly referred to as IUs
- Significant Industrial User (SIU)
 - IU subject to categorial pretreatment standards
 - IU discharging 25,000 gallon per day of process wastewater
 - IU contributing a waste stream that constitutes over 5% or more of the average dry-weather hydraulic or organic POTW capacity
 - IU designated by POTW as having a reasonable potential to affect the POTW's operation
- Categorical IU – An IU subject to national categorial pretreatment standards (e.g., dairy products, metals forming)

Implementation and Enforcement

- *Most of the responsibility rests on local municipalities to implement and enforce*
- Control Authority: Where a POTW has an approved pretreatment program, the POTW is the control authority
- Approval Authority: either the state with an approved pretreatment program or the EPA region for that state
- Five states have implemented the pretreatment program in lieu of requiring its POTWs to implement:
 - AL, CT, MS, NE , VT

PRETREATMENT STANDARDS



POTW Pretreatment Programs

- Once a need for the program is determined, the POTW's NPDES permit is modified to require development and submission of a local program to the Approval Authority
- Submissions proceed through the public notice process
- Approval Authority oversees implementation through annual reports and periodic inspections and audits

PRETREATMENT ELEMENTS

Six Minimum POTW Pretreatment Requirements

1. Legal Authority

The POTW must operate pursuant to legal authority enforceable in federal, state or local courts, which authorizes or enables the POTW to apply and enforce any pretreatment requirements developed pursuant to the CWA and implementing regulations. At a minimum, the legal authority must enable the POTW to

- i. Deny or condition discharges to the POTW;
- ii. Require compliance with pretreatment standards and requirements;
- iii. Control IU discharges through permits, orders, or similar means;
- iv. Require IU compliance schedules when necessary to meet applicable pretreatment standards and/or requirements and the submission of reports to demonstrate compliance;
- v. Inspect and monitor IUs;
- vi. Obtain remedies for IU noncompliance; and
- vii. Comply with confidentiality requirements.

2. Procedures

The POTW must develop and implement procedures to ensure compliance with pretreatment requirements, including

- i. Identifying and locating all IUs subject to the pretreatment program;
- ii. Identifying the character and volume of pollutants contributed by such users;
- iii. Notifying users of applicable pretreatment standards and requirements;
- iv. Receiving and analyzing reports from IUs;
- v. Sampling and analyzing IU discharges;
- vi. Evaluating the need for IU slug control plans;
- vii. Investigating instances of noncompliance; and
- viii. Complying with public participation requirements.

Six Minimum POTW Pretreatment Requirements, cont'd.

3. Funding

The POTW must have sufficient resources and qualified personnel to carry out the authorities and procedures specified in its approved pretreatment program.

4. Local Limits

The POTW must develop local limits in defined circumstances or demonstrate why these limits are not necessary.

5. Enforcement Response Plan (ERP)

The POTW must develop and implement an ERP that contains detailed procedures indicating how the POTW will investigate and respond to instances of IU noncompliance.

6. List of SIUs

The POTW must prepare, update, and submit to the Approval Authority a list of all SIUs and where applicable indicate which SIUs are NSCIUs or MTCIUs.

Three Types of Pretreatment Requirements

- Prohibited Discharge Standards
- Effluent Guidelines and Categorical Pretreatment Standards
- Local Limits



Summary of Standards

	General and specific prohibitions	Categorical pretreatment standards	Local limits
Development	Established at the federal level.	Established at the federal level.	Developed by the POTWs.
Reference	40 CFR 403.5(a) & (b)	40 CFR Parts 405–471	Requirements for development found in 40 CFR 403.5(c) & 403.8(f)(4). Local limits are often found in the local sewer use ordinance.
Applicability	All IUs	CIUs	Commonly all IUs or all SIUs, but depends on the allocation method used when developing limits.
Purpose	Provide for general protection of the POTW. Categorical pretreatment standards or local limits may be more stringent.	Minimum standards based on available treatment technology and pollution prevention measures for controlling nonconventional and toxic pollutants that could cause pass through, interference, and such at the POTW. Local limits may be more stringent.	Provide site-specific protection for a POTW and its receiving waters. Categorical standards may be more stringent.

Prohibited Discharge Standards

- All IUs are subject to *general* and *specific* prohibitions
- General prohibitions forbid discharge of any pollutant that causes passthrough or interference
- Specific prohibitions include 8 categories of pollutant discharge:
 - Fire or explosion hazards, corrosives, excessive amounts causing obstruction of flow
 - Flow rate or concentration causing interference
 - Heat in amounts that will inhibit biological activity
 - Oil
 - Discharges resulting in the formation of toxic gases that could cause acute worker health and safety issues
 - Trucked or hauled pollutants, except at points designated by the POTW

Effluent Guidelines and Categorical Pretreatment Standards

- National standards developed by EPA on an industry-by-industry basis
- Intended to represent the greatest pollutant reduction economically available for an industry
- Specify quantities or concentrations of pollutants that may be discharged to a POTW by existing or new IUs in specific industrial subcategories
- Standards are in addition to prohibited discharge standards and local limits
- EPA has the following types of categorical pretreatment standards:
 - Concentration-based standards
 - Mass limits based on production rates
 - Standards that allow for use of BMPs
 - Standards that prohibit discharge of any kind

Effluent Limitations

- Local limits are often more stringent than categorical pretreatment standards
- 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
- Note that categorical pretreatment standards apply at end-of-process, whereas local limits normally apply at end-of-pipe
- If categorical standards are to be applied at the end-of-pipe, the permit writer must adjust the categorical pretreatment standards to end-of-pipe limits using the combined waste stream formula

Baseline Monitoring Report

- Baseline Monitoring Reports (BMR) are required from all industrial users of a POTW 180 days after the effective date of an applicable categorical pretreatment standard
- These reports are analogous to NPDES permit applications
- IUs must provide information on production processes, water usage, discharge, and compliance status
- Compliance schedules are required from all IUs not in compliance
- Information is used by the Control Authority to determine if the IU is meeting applicable pretreatment standards on a consistent basis and, if not, whether additional operation and maintenance, additional treatment by the industrial user, or both is required for consistent compliance

[Categorical Industry: Baseline Monitoring Reports \(epa.gov\)](http://epa.gov)

Local Limits and Development Procedure

- Developed for pollutants that could cause interference, passthrough, sludge contamination, or worker health and safety problems
- Developed to regulate discharge from all SIUs, not just CIUs
- Usually imposed at the end-of-pipe discharge from the IU: BASED POTW LIMITS

PROCEDURE

- Conduct an Industrial Waste Survey
- Determine the character and volume of pollutants contributed
- Identify additional pollutants of concern
- Determine the Maximum Allowable Headworks Loading (MAHL) based on POTW removal efficiencies and permit limits for effluent and sludge
- Determine contributions from background sources to determine the Maximum Allowable Industrial Load (MAIL)
- Implement a system (usually mass limits for IUs) to ensure MAHLs are not exceeded.

PROGRAM IMPLEMENTATION POTW RESPONSIBILITIES

Legal Authority

Industrial Waste Surveys

IU Permits

Inspections

Sampling

Enforcement

Program Management
and Record- Keeping

Public Participation

Reporting

Legal Authority

- GPRs do not provide POTW with legal authority to implement and enforce the pretreatment program
- Usually necessary for the POTW to establish local regulations through a Sewer Use Ordinance (SUO), which is part of the City or County Code
- EPA has a guidance document “EPA Model Pretreatment Ordinance” to guide POTWs that are required to develop an SUO
- https://www3.epa.gov/npdes/pubs/pretreatment_model_suo.pdf

Industrial Waste Surveys

- The federal regulations require POTWs to identify and locate all IUs, and to maintain a list of SIUs
- Resources to use in identifying IUs:
 - Water and sewer billing records
 - Applications for sewer use
 - Phone directories
 - Chamber of Commerce
- Once identified, the POTW must classify each IU to determine applicable pretreatment standards
- Use of an Industrial Waste Survey (IWS) is recommended
- POTW must notify each SIU of its status and all applicable pretreatment standards and requirements
- IU inventory must be updated as needed and provided to the Approval Authority as part of the annual report
- Implement a system to track IU information, classification changes, and new user info



Industrial Survey Form

- Name
- Location
- Classification (SIC codes)
- Manufacturing Information
- Description of Any Pretreatment Systems
- Volume of Discharge
- Chemical Usage

Industrial Survey Form	
FACILITY NAME AND ADDRESS	CONTACT INFORMATION
1. Company Name:	3. Contact Name:
2. Facility Address (Street, City, State, Zip Code):	4. Title:
	5. Telephone No.
3. Mailing Address (if different from street address):	6. Email Address:
MANUFACTURING OR SERVICE ACTIVITIES	
7. Please provide a brief description of manufacturing or service activities performed:	
8. *Applicable SIC code(s):	
*See the following website to determine SIC Code: www.naics.com/ric-codes/industry-drilldown/	
9. Shifts per Day:	10. Number of Employees:
11. Circle the days of operation: S M T W T F S	
UTILITY SERVICES	
12. Is this facility connected to the Dubois sanitary sewer?	Yes No
13. If "No", are there plans to connect?	Yes No
If "Yes", please indicate estimated time period.	
14. Does this facility receive billing statements from the Dubois Water Department?	Yes No
If "Yes", please list your account number(s).	
Quantity of water used in gallons per day from your city statement?	
15. Does your facility generate process wastewater ¹ (sanitary wastewater ² excluded)?	Yes No
If "Yes", is the process wastewater discharged to the Dubois sanitary sewers? Yes No	

Chemical Usage, Storage and Hauling

20. Please list any chemicals used or waste materials stored in quantities greater than 5 gallons or 30 pounds per month. Please specify if updated Safety Data Sheets are available at your facility. Attach a separate sheet of paper if additional space is required.

21. Are there any solids, liquids, or other wastes hauled offsite. Yes No

If "Yes", please describe the types of chemicals or waste material hauled offsite and the ultimate disposition of the material (i.e. recycled, landfilled, etc.). Include estimated quantities and frequency of hauling.

Certification Statement:

I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining the information reported herein, I believe that the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment.

Signature of Authorized Representative* _____

Print Name: _____

Date: _____

Phone number (_____) _____ - _____

** Surveys must be signed as follows: Corporations, by a principal executive officer of at least the level of vicepresident; partnership, by a general partner; sole proprietorship, by the proprietor, (ref. 40 CFR part 403.12(l))*

IU Permits

- All IUs must be controlled through a general permit, order, or other means to ensure compliance
- SIUs must have an individual permit
- Three Phases
 - I. Collection and verification of information
 - II. Data interpretation and fact sheet development
 - III. Permit development and issuance



Inspections

- All SIUs must be inspected at least once per year pursuant to the regulations
- Additional inspections might be necessary depending on:
 - Variability of an SIU's effluent
 - Effect of the SIU's discharge on the POTW, facility's compliance history
- Inspections consist of:
 - Preparation (review records)
 - On-site assessment
 - Follow-up (inspection report)



Sampling

- All SIUs must be sampled at least annually
- Each SIU must self-monitor at least semi-annually
- POTW may choose to monitor in lieu of IU performing self-monitoring
- If sampling violates a permit condition, IU must notify POTW within 24 hours and perform repeat sampling so that new results are submitted within 30 days of becoming aware of the violation
- Adhere to proper sample collection and handling protocols, analytical methodologies [40 CFR Part 136], and record-keeping requirements [40 CFR 403.12(o)(1)]

Enforcement

- POTWs must review IU reports and respond to noncompliance in a timely, fair, and consistent manner
- All POTWs must implement an Enforcement Response Plan (ERP) per 40CFR 403.8(f)(5)
- Develop an enforcement response guide to ensure consistency in enforcement
- Enforcement Mechanisms
 - Informal notice (call or letter)
 - Informal meeting
 - Warning letter or Notice of Violation (NOV)
 - Administrative orders and compliance schedules
 - Administrative fines
 - Civil Suits
 - Criminal prosecution
 - Termination of service

Program Management and Record-Keeping

Maintain records for 3 years:

- Industrial waste questionnaires
- Permit applications, permits, and fact sheets
- Inspection reports
- IU reports
- Monitoring data (including laboratory reports)
- Required plans (e.g., slug control, sludge management, pollution prevention)
- Enforcement activities
- All correspondence to and from the IU
- Phone logs and meeting summaries

Public Participation

- GPR encourage public participation by requiring a public notice in a newspaper of general circulation or a hearing for:
 - Pretreatment program approval
 - Implementation of the program
 - Program modifications
 - Annual list of IUs that are in SNC within the previous 12 months



Reporting

POTW must submit an annual report to the Approval Authority with the following:

- List of all IUs
- Summary of IU compliance within the reporting period
- Summary of compliance and enforcement activities
- Summary of changes to the program
- Any other information requested by the Approval Authority

IU Permit Elements

- Part 1: Effluent Limits (Categorical and Local)
- Part 2: Monitoring Requirements
- Part 3: Reporting Requirements
- Part 4: Slug Discharge Control Requirements
- Part 5: Special Conditions (including Compliance Schedule)
- Part 6: Standard Conditions
- EPA has a manual detailing procedures for drafting permits
https://www3.epa.gov/npdes/pubs/pretreatment_iu_permitmanual.pdf

Common Permitting Errors

- 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
- 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

Permit Issuance

- Provide a draft permit to the permittee for comment
- Issue final permit once comments are addressed

