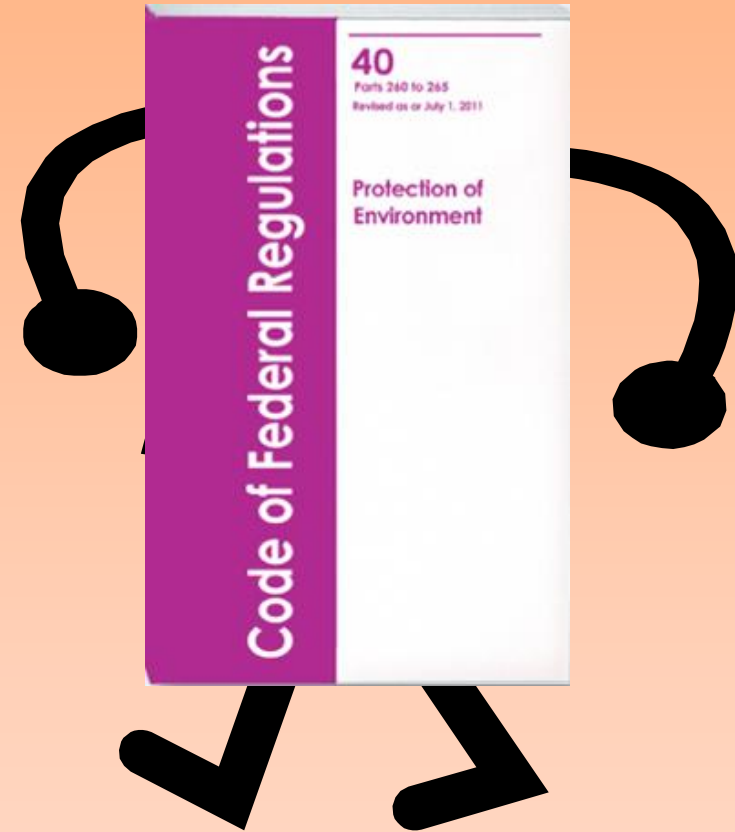


Essential
Pretreatment
program
knowledge from
“the Walking 40 CFR”



Definitions

Act	Water Management Division Director	NPDES Permit	Pretreatment Requirements
Approval Authority	Indirect Discharge	NPDES State	Regional Administrator
Approved POTW Pretreatment Program	Industrial User	Pass Through	Significant Industrial User
Best Management Practice(BMP)	Interference	Publicly Owned Treatment Works(POTW)	Submission
Control Authority	National Pretreatment Standard	POTW Treatment Plant	
Director	New Source	Pretreatment	40 CFR 403.3



Purpose

Establishes responsibilities of Federal, State, and local government, industry and the public to implement National Pretreatment Standards **to control pollutants which pass through or interfere** with treatment processes in Publicly Owned Treatment Works (POTWs) or which may contaminate sewage sludge.



State or Local Law

Nothing in this regulation is intended to affect any Pretreatment Requirements, including any standards or prohibitions, established by **State or local law** as long as the State or local requirements are **not less stringent** than any set forth in National Pretreatment Standards, or any other requirements or prohibitions established under the Act or this regulation.



Applicability

To **pollutants from non-domestic sources** covered by Pretreatment Standards which are indirectly discharged into or transported by truck or rail or otherwise introduced into POTWs;

40 CFR 403.1(1)



Applicability

To POTWs which receive wastewater sources subject to National Pretreatment Standards;

40 CFR 403.1(2)



When does EPA require Pretreatment Programs?

Total design flow of 5 MGD for POTW	Nature or volume of industrial wastewater entering influent of wastewater facility
Upsets	Violations of NPDES permit limits
Sludge contamination	Interference or pass-through



Initial Pretreatment Program submittal dates?

Upon Approval Authority notification of requirement as soon as possible but **no later than one year.**

What's First?





Legal Authority



Legal Authority

Important to note:

- ▶ Provides the POTW the right to act.
40 CFR 403.8(f)(1)

- ▶ People who review this document when submitting for approval
 1. Attorney
 2. Approval Authority(State/EPA)
 3. Public(Open for Public Comment minimum 30 days in accordance with 40 CFR 25/preferred time is 45 days)

- ▶ Approval Authority looks at this prior to any audit

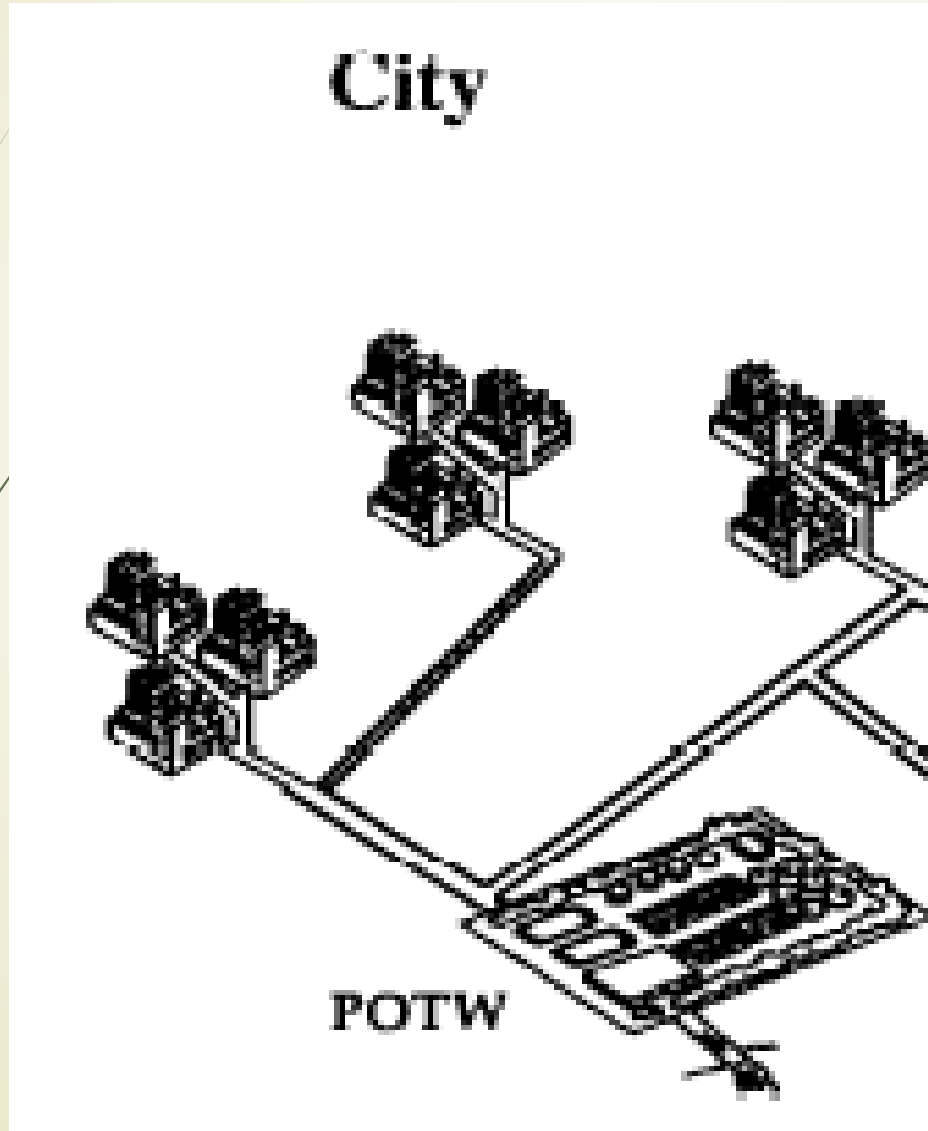




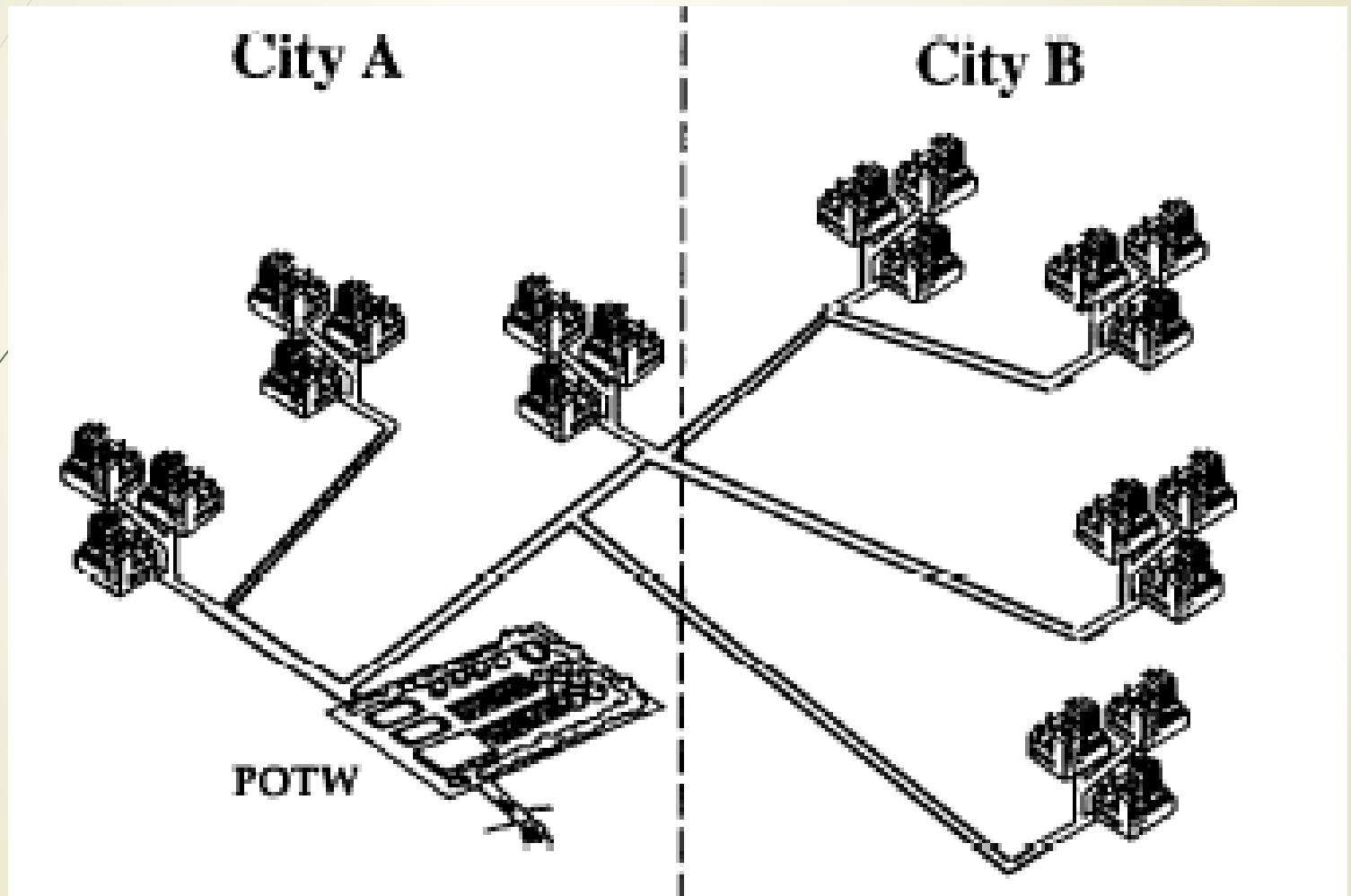
Legal Authority

- ▶ Ordinances
 - ▶ Rules/Regulations
 - ▶ Multijurisdictional agreements
- 

Ordinances



Rules & Regulations

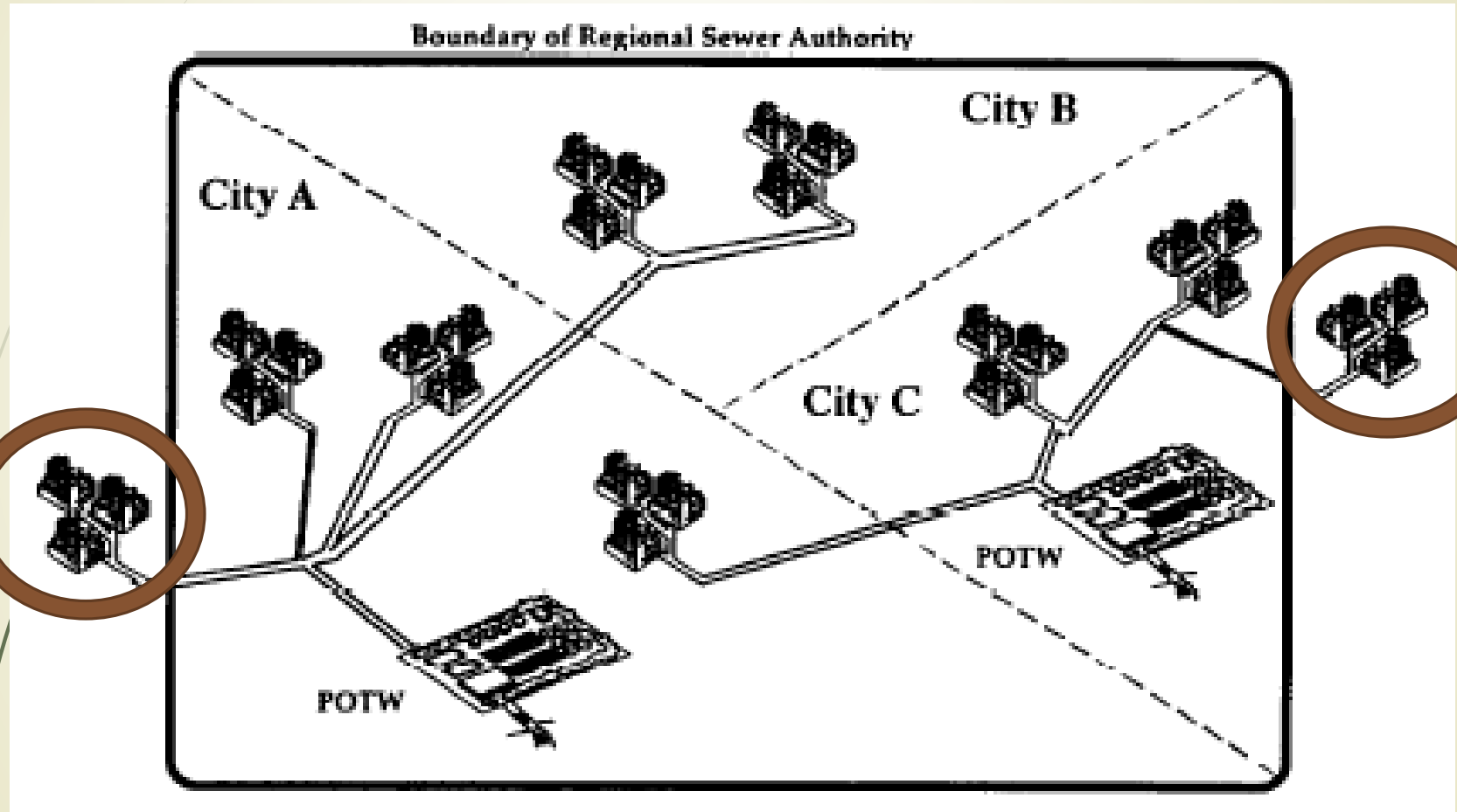




Rules & Regulations

- ▶ Must get all cities to adopt the Rules & Regulations

Multijurisdictional Agreements





What needs to be included in
a POTW's Legal Authority?



EPA requires 7 essential things in a legal authority

- i. Control of discharges
- ii. Requirement for compliance with Pretreatment Standards
- iii. Permit and/or other control mechanisms (Right of Issuance and conditions)
- iv. Require the development of a compliance schedule for the installation of technology required to meet applicable Pretreatment Standards and Requirements
- v. Right of entry (Inspections, surveillance, and monitoring)
- vi. Remedies for non-compliance (injunctive relief, civil, and criminal penalties)
- vii. Confidentiality requirements

40 CFR 403.8(f)(1)



i.

Control of Discharges





Three ways to control:

- **Deny:** No discharge and/or Haul away
- **Condition:** Make install Treatment
- **Allow:** No Treatment

When to Control:

- National Pretreatment Standard
- New IU discharge
- Increase or decrease contribution (flow or concentration)
- Changes in the nature of pollutants
- Reassessment of local limits



ii.

Requirement for compliance with
Pretreatment Standards



National Pretreatment Standards

- General Prohibitions
- Specific Prohibitions
- Significant Industrial Users
- Local Limits (POTW developed)
- Best Management Practices



General Prohibition

- ▶ A User may not introduce into a POTW any pollutant(s) which cause Pass Through or Interference

Specific Prohibitions

1. Pollutants which 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 specific in 40 CFR 261.21
2. Pollutants which will cause **corrosive structural damage** to the POTW, but in no case discharges with **pH lower than 5.0**, unless the works is specifically designed to accommodate such Discharges.
3. **Solids or viscous pollutants** in amounts which will cause obstruction to the flow in the POTW resulting in Interference
4. Any pollutant, including **oxygen demanding pollutants (BOD, etc.)** released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW
5. **Heat** in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant **exceed 40 degrees C (104 degrees F)** unless the Approval Authority, upon request of the POTW, approves alternate temperature limits
6. **Petroleum oil, nonbiogradable cutting oil, or products of mineral oil origin** in amounts that will cause interference or pass through
7. Pollutants which results in the presence of **toxic gases, vapors, or fumes** within the POTW in a quantity that may cause acute worker health and safety problems
8. **Any trucked or hauled pollutants** except at the discharge points designated by the POTW

Significant Industrial User


- ▶ Industrial User that meets any of the following:
 1. Is a **CIU (Categorical Industrial User)**
 2. Any Industrial User that discharges an average of **25,000 gallons per day or more of process wastewater excluding sanitary, non-contact cooling water and boiler blow down wastewater.**
 3. Contributes a **process** wastestream which makes **up 5 percent or more** of the average dry weather **hydraulic capacity** of the WRF.
 4. Contributes a process wastestream which makes up **5 percent or more of the organic capacity** of the WRF.
 5. The Industrial User has a **potential for adversely affecting** the POTW's operation or for violating any Pretreatment Standard or requirement. (in accordance with 40 CFR 403.8(f)(6))

CIU (Categorical Industrial Users)

405 - Dairy Products	420 - Iron and Steel Manufacturing	436 - Mineral Mining and Processing	454 - Gum and Wood Chemicals Manufacturing
406 - Grain Mills	421 - Nonferrous Metals Manufacturing	437 - Centralized Waste Treatment	455 - Pesticide Chemicals
407 - Canned and preserved fruits and vegetables	422 - Phosphate Manufacturing	438 - Metal Products and Machinery	457 - Explosive Manufacturing
408 - Canned and preserved seafood	423 - Steam Electric Power Generating	439 - Pharmaceutical	458 - Carbon Black Manufacturing
409 - Sugar Processing	424 - Ferroalloy Manufacturing	440 - Ore Mining and Dressing	459 - Photographic
410 - Textile Mills	425 - Leather Tanning and Finishing	441 - Dental Office	460 - Hospital
411 - Cement Manufacturing	426 - Glass Manufacturing	442 - Transportation Equipment Cleaning	461 - Battery Manufacturing
412 - Concentrated Animal Feeding Operations	427 - Asbestos Manufacturing	443 - Paving and Roofing Materials	463 - Plastics Molding and Forming
413 - Electroplating	428 - Rubber Manufacturing	444 - Waste Combustor	464 - Metal Molding and Casting
414 - Organic Chemicals, Plastics, and Synthetic Fibers	429 - Timber Products	445 - Landfills	465 - Coil Coating
415 - Inorganic Chemicals	430 - Pulp, Paper, and Paperboard	446 - Paint Formulating	466 - Porcelain Enameling
417 - Soap and Detergent Manufacturing	432 - Meat and Poultry Products	447 - Ink Formulating	467 - Aluminum Forming
418 - Fertilizer Manufacturing	433 - Metal Finishing	450 - Construction and Development	468 - Copper Forming
419 - Petroleum Refining	434 - Coal Mining	451 - Aquatic Animal Production	469 - Electrical and Electronic Components
	435 - Oil and Gas Extraction		471 - Nonferrous Metals Forming and Metal Powders



Categorical Limits - 40 CFR 404 through 471

- a. Direct discharge control only (no POTW control)
 - b. New or Existing Source
 - c. Concentration based
 - d. Production based
 - e. Zero discharge
 - f. One time compliance certification (Dental rule)
- 




Local Limits - POTW developed

1. Sludge capacity
2. POTW plant effluent
3. Flow



Reassessment of Local Limits

- New water quality standards set in your National Pollution Discharge Elimination System permit such as Nutrients
 - Changing the use of wastewater plant discharge or sludge disposal
- 



Best Management Practices

- ▶ POTWs may develop Best Management Practices to implement elimination of specific limits, prohibitions, pass-through and interference violations. Such BMPS shall be considered local limits and Pretreatment Standards



IU Notification Timeframes



New National Pretreatment Standard

- ▶ Within 180 days after the effective date of a categorical Pretreatment Standard or final administrative decision made upon a categorical determination submission...

40 CFR 403.12(b)



New IU Discharge

- ▶ At least 90 days prior to commencement of discharge, New Sources, and sources that become Industrial Users subsequent to the promulgation of an applicable categorical Standard....



Change in Discharge

- ▶ Include a specific provision requiring IUs to provide timely notice of any substantial change in the quantity or quality of their industrial waste discharge to the POTW.

Be specific, be consistent



iii.

Permit and/or other control
mechanisms

Permit and/or Other Control Mechanisms

- ▶ **Right to issue permits and/or other control mechanisms**
- ▶ What **type of control mechanism** will be issued (individual and/or general permits, compliance orders, etc.)
- ▶ **Duration** (no longer than 5 years)
- ▶ **Non-transferability** without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator
- ▶ **Effluent limits** (General Prohibition, Specific Prohibition, Categorical, Local, Best Management Practices, Flow)
- ▶ **Sampling** (POTW, Self Monitoring)
 1. Pollutants
 2. Frequency
 3. Method (40 CFR 136)
- ▶ **Reporting**
- ▶ **Recordkeeping**
- ▶ **Applicable civil and criminal penalties**
- ▶ **Requirements to control Slug Discharges** 40 CFR 403.8(f)(1)(iii)



Change in Ownership only

- ▶ At least 30 days in advance of proposed transfer date Industrial User must:
 - ▶ A signed and certified document
 - ▶ Certified Document must include:
 - ▶ Description of the anticipated transaction
 - ▶ Specific transfer date
 - ▶ Written agreement between the current and future owner/operator that the current permit be transferred
 - ▶ Statement of intention to not modify operations.




POTW must

- ▶ Must modify existing permit:
 - ▶ New owner
 - ▶ New Permit effective date



If Industrial User makes changes

- ▶ POTW must act as if user is a new Industrial User
 - ▶ Require applications
 - ▶ Possibly new sources standards
- 



iv.

Require the development of a
compliance schedule





Compliance Schedule

- ▶ Development of a compliance **schedule for the installation of technology** required to meet applicable Pretreatment Standards...

40 CFR 403.8(f)(1)(iv)(A)

Compliance Schedule

- Submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance, including but not limited to reports required in 403.12, which are:
 1. Baseline Report
 2. 90 Day Compliance Report
 3. Periodic Compliance Report
 4. Slug Load notices
 5. Certification Statements



V.

Right of entry



Right of Entry

- ▶ The ability to be allowed on the facility's property to perform:
 1. Inspection
 2. Surveillance
 3. Monitoring

40 CFR 403.8(f)(1)(v)

Never use the words **“reasonable time”**.



vi.

Remedies for non-compliance





Remedies for Non-Compliance

- ▶ Injunctive Relief – Prohibit/stop a discharge
- ▶ Civil Penalties – Sought as compensation for damages
- ▶ Criminal Penalties – Punish the person for wrong doing

40 CFR 403.8(f)(1)(vi)





- ▶ Injunctive Relief

All POTW's shall be able to seek injunctive relief....

- ▶ Civil or Criminal Penalties

All POTWs shall also have authority to seek or assess civil or criminal penalties in at least the amount of \$1,000 a day for each violation....



When are you allowed to use
injunctive relief?



- ▶ **Endangerment to Health and Welfare**


The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to **halt or prevent any discharge of pollutants** to the POTW which reasonably appears to present an **imminent endangerment to the health and welfare** of persons.

- ▶ **Environmental or Interference with POTW**

The POTW shall have authority and procedures (which shall include notice to the affected industrial users and opportunity to respond) to **halt or prevent any discharge** to the POTW which presents or may present and **endangerment to the environment or which threatens to interfere** with the operation of the POTW.



Caution!!!!

- ▶ The Approval Authority shall have authority to seek judicial relief and may also use administrative penalty authority when the POTW has sought a monetary penalty which the Approval Authority believes to insufficient.
- 



vii.

Confidentiality
requirements



Confidentiality Requirements

- ▶ Pretreatment programs shall comply with 40 CFR 403.14.
 1. Claims must be asserted at time of submission.
 2. Stamping of “confidential business information” on each page containing such information
 3. Confidentiality claims shall be treated in accordance with 40 CFR part 2
 4. Effluent data shall be available to the public without restriction



What's next?






40 CFR 403.8(f)(2)

EPA requires these 8 Essential Procedures

- i. Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program
- ii. Identify the character and volume of pollutants contributed by Industrial Users
- iii. Notify Industrial Users identified as Significant Industrial User of status
- iv. Receive and analyze self-monitoring reports and other notices submitted by Industrial Users
- v. Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities
- vi. Evaluate whether each SIU needs a Slug Discharge Control Plan
- vii. Investigate instance of noncompliance with Pretreatment Standards and Requirements,
- viii. Comply with public participation requirements of 40 CFR part 25 in the enforcement of National Pretreatment Standards.



i. Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program, which are:

1. Categorical Industrial Users
2. Significant Industrial Users
3. Industrial Users that may adversely affect the POTW such as Food Service and Auto Service establishments



Industrial Waste Survey

Recommended Minimum:

- ▶ Name of Industry
- ▶ Address of facility
- ▶ Standard Industrial Classification code(SIC) or North American Industrial Classification Standard (NAICS)
- ▶ Wastewater flow
- ▶ Types and concentrations of pollutants contained in discharge
- ▶ Major products manufactured or services supplied
- ▶ Description of existing on-site pretreatment facilities and practices



Industrial Waste Survey

Additional information for better evaluation:

- ▶ Locations of discharge points
- ▶ Raw materials use or stored at the site
- ▶ Flow diagram or sewer map for the industry
- ▶ Number of employees
- ▶ Operation and production schedules
- ▶ Spill Prevention Control and Countermeasures (SPCC) plan description




List of Industrial Users


- ▶ A list of Industrial Users shall be prepared and maintained. The list shall identify the Industrial Users that meet the Significant Industrial User criteria or why Industrial Users do not meet the Significant Industrial User criteria.

ii. Identify the character and volume of pollutants contributed by Industrial Users identified under paragraph (f)(2)(i)





iii. Notify Industrial Users identified as Significant Industrial User of status and applicable Pretreatment Standards within 30 days of determination.



iv. Receive and analyze self-monitoring reports and other notices submitted by Industrial Users in accordance with the self-monitoring requirements in 403.12

v. Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify occasional and continuing noncompliance with Pretreatment Standards.



40 CFR 403.8(f)(2)

v. Inspect and sample the effluent from each Significant Industrial User at least once a year



40 CFR 403.8(f)(2)

vi. Evaluate whether each Significant Industrial User needs a Slug Discharge Control Plan or other action to control Slug Discharges. Significant Industrial Users must be evaluated within one year of being designated a Significant Industrial User.



40 CFR 403.8(f)(2)



Slug Discharge Control Plan

- A. Description of discharge practices, including non-routine batch Discharges;
- B. Description of stored chemicals;
- C. Procedures for immediately notifying the POTW of Slug Discharges, including any Discharge that would violate a prohibition with procedures for follow-up written notification within five days;
- D. If necessary, procedures to prevent adverse impact from accidental spills, including
 1. Inspection and maintenance of storage areas,
 2. Handling and transfer of materials,
 3. Loading and unloading operations,
 4. Control of plant site run-off,
 5. Worker training,
 6. Building of containment structures or equipment,
 7. Measures for containing toxic organic pollutants(including solvents) and/or
 8. Measures and equipment for emergency response;

vii. Investigate instance of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices or indicated by analysis.



40 CFR 403.8(f)(2)




- ▶ **Endangerment to Health and Welfare**

The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health and welfare of persons.

- ▶ **Environmental or Interference with POTW**

The POTW shall have authority and procedures (which shall include notice to the affected industrial users and opportunity to respond) to halt or prevent any discharge to the POTW which presents or may present and endangerment to the environment or which threatens to interfere with the operation of the POTW.



viii. Comply with public participation requirements of 40 CFR part 25 in the enforcement of National Pretreatment Standards. These procedures shall include provision for at least annual public notification in a newspaper(s) of general Circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW of Industrial Users which, at any time during the previous 12 months, were in significant noncompliance...

Significant Noncompliance(SNC)

- A. Chronic violations – 66 percent or more during a 6-month period exceed
- B. Technical Review Criteria (TRC) violations- 33 percent or more during a 6-month period exceed the numeric standard multiplied by the applicable TRC
 - 1. TRC= 1.4 for BOD,TSS, fats, oil, and grease
 - 2. TRC= 1.2 for all other pollutants except pH



Significant Noncompliance(SNC)

- C. Any other violation of a Pretreatment Standard or requirement that the POTW determines has caused , alone , or in combination with other Discharges, Interference or Pass Through(including endangering the health of POTW personnel or the general public)
- D. Any discharge of a pollutant that has cause imminent endangerment to human health, welfare or to the environment or has resulted in the POTWs exercise of its emergency authority to halt or prevent such a discharge




Significant Noncompliance(SNC)

- E. Failure to meet, within 90 days after the schedule date, a compliance schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction or attaining final compliance;
- F. Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;



Significant Noncompliance(SNC)

- G. Failure to accurately report noncompliance
 - H. Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment Program.
- 

Significant Noncompliance(SNC)

Table 1 - SNC Time Frames

SNC Quarter	Chronic Effluent and TRC Violations 40CFR '403.8(f)(2)(vii)(A&B)	Reporting Requirements and Other Criteria 40 CFR '403.8(f)(2)(vii)(C-H)
1st Quarter	October-March	January-March
2nd Quarter	January-June	April-June
3rd Quarter	April-September	July-September
4th Quarter	July-December	October-December




Funding

- ▶ The POTW shall have sufficient resources and qualified personnel to carry out the authorities and procedures.

EPA POTW Pretreatment Program Development Table 7.2

POTW Flow Range (MGD)	Relative Number of Indirect Dischargers	Range of Personnel Requirements for Pretreatment Program
5	small large	1-3 2-5
5-25	small large	2-4 4-8
25-50	small large	4-6 8-10
50	small large	6-8 10-15
100	large	15-50*



EPA POTW Pretreatment Program Development 7.1.2.4

Staff Qualifications:

- ▶ Education and experience should be appropriate for the tasks that the person will be expected to perform.
- ▶ The pretreatment program is likely to require support from personnel with experience in:
 - ▶ Engineering (Environmental, civil, sanitary, or chemical)
 - ▶ Chemistry
 - ▶ Public Administration
 - ▶ Accounting and Finance
 - ▶ Law

Local Limits

- ▶ The POTW shall develop local limits or demonstrate that they are not necessary.

<u>Pollutants</u>	<u>Daily Maximum (mg/l)</u>
Cyanide	8.7
Aluminum	865.9
Arsenic	16.1
Cadmium	2.4
Chromium	9.3
Copper	33.0
Lead	46.2
Mercury	0.0055
Nickel	188.8
Selenium	4.4
Silver	8.8
Zinc	181.6

40 CFR 403.8(f)(4)



Enforcement

- ▶ The POTW shall develop and implement an enforcement response plan.

40 CFR 403.8(f)(5)



Enforcement Response Plan

- i. Describe how instances of noncompliance will be investigated
- ii. Types of escalating enforcement that will be taken to anticipated types of industrial user violations and the time responses will take place.
- iii. Identify the authorized representative responsible for each type of response.
- iv. Adequately reflect the POTW's primary responsibility to enforce Pretreatment Standards



Electronic Documents

- ▶ Electronic reporting must meet requirements in 40 CFR Part 3.

40 CFR 403.8(g)