

OVERVIEW OF POTW PRETREATMENT PROGRAM REQUIREMENTS

STATE WATER BOARDS

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KEY TERMS

- **CFR**
 - Code of Federal Regulations
- **CWA**
 - Clean Water Act
- **Pretreatment (PT)**
 - Pollutant control requirements for
nondomestic sources discharging to POTWs

KEY TERMS

- **Control Authority (CA)**
 - The entity that regulates industrial users (IUs)
 - the POTW or Water Boards if no approved POTW - PT program
- **Approval Authority (AA)**
 - The entity that oversees CAs (i.e., the Water Boards per EPA Delegation)
- **IU**
 - Industrial User
 - A source of Indirect Discharge to the POTW

KEY TERMS

- **CIU**
 - Categorical industrial user
 - The industrial activity performed at the facility is regulated by one or more of the federal regulations found in 40 CFR Parts 401 - 424 and 425 – 471
 - The categorical activity is assigned pretreatment limitations, reporting requirements, or both
- **SIU**
 - Significant industrial user
 - IU discharging 25,000 gallons per day of process waste water
 - IU discharging 5% of the hydraulic, organic, or solids loading of the POTW
 - IU designated by CA due to reasonable potential to affect the POTW

KEY TERMS

- **Interference**
 - A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:
 - Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal
 - Is a cause of a violation of any requirement of the POTW's NPDES permit

KEY TERMS

- **Pass Through**
 - A discharge which exits the POTW into waters of the United States and
 - Is a cause of a violation of any requirement of the POTW's NPDES permit including an increase in the magnitude or duration of a violation

PURPOSE OF THE NATIONAL PRETREATMENT PROGRAM

- Prevent the introduction of pollutants into POTWs which will:
 - Interfere with the treatment process
 - Pass Through the treatment process untreated
 - Be Incompatible with the treatment process
- To improve wastewater and sludge recycling and reclamation opportunities
- To protect POTW workers (i.e., from fires, explosions, etc.)

HISTORY OF THE PRETREATMENT PROGRAM

- Federal PT Regulations adopted 1978, 40 CFR part 403
- State PT Regulations, Water Code section 13263.3, 13263.6, 13362, 13370.5 and Title 23, California Code of Regulations, §2233
 - State requirements basically mirror federal requirements but apply to discharges to land
- California PT program approved by EPA on September 22, 1989
 - California delegated as Approval Authority (AA) by EPA

PRETREATMENT PROGRAM APPLICABILITY

- **Applicability**

- POTWs with a design flow greater than 5 MGD and receiving flow subject to PT standards or receiving pollutants which pass through or interfere
- Approval Authority can require at their discretion
- WDR permitted POTWs discharging to land with design flow greater than or equal to 5 MGD per California Water Code

Note: Significant and Categorical Industrial users in jurisdictions without approved pretreatment programs are still required to meet PT standards

OVERVIEW OF DISCHARGE LIMITATIONS

- **EPA Developed Categorical Standards**

- 24 categories, BAT, PSES/PSNS focused on:
 - Conventional pollutants
 - 126 "priority pollutants" & Industries discharging priority pollutants

- **Local Limits**

- Developed by POTW to:
 - Meet program objectives
 - Maintain compliance with its NPDES permit

- **See 40 CFR Part 403 for General and Specific Prohibitions**

OVERVIEW OF DISCHARGE LIMITATIONS

- **Specific Discharge Prohibitions per 40 CFR 403.5(b)**
 - Pollutants which create a fire or explosion hazard
 - Pollutants which will cause corrosive structural damage to the POTW (i.e., pH less than 5.0 or more than 12.0)
 - Solid or viscous pollutants causing obstruction and resulting in interference
 - Pollutants including oxygen demanding pollutants (BOD, etc.), released at a flow rate and/or concentration causing interference

OVERVIEW OF DISCHARGE LIMITATIONS

- **Specific Discharge Prohibitions per 40 CFR 403.5(b)** (cont'd)
 - Wastewater having temperature which will inhibit biological activity in the POTW resulting in interference, in no case to exceed 140° F
 - Products of mineral Oil origin in amounts that will cause interference or pass through
 - Pollutants which result in the presence of toxic gases, vapors, or fumes
 - Trucked or hauled pollutants, except at discharge points designated by the POTW
 - See 40 CFR 403.5(b) for additional specific discharge prohibitions

PRETREATMENT PROGRAM ROLES AND RESPONSIBILITIES

- **Approval Authority (AA)**
 - Oversee adequate statewide implementation of PT program requirements
 - Oversight responsibilities include:
 - PT program implementation by POTW s
 - PT program implementation by SIUs/CIUs in jurisdictions without approved PT programs or where PT program is not required
 - Legal Authority

PRETREATMENT PROGRAM ROLES AND RESPONSIBILITIES

- **The POTW (i.e., control authority)**
 - Prevent interference and pass through at the treatment plant
 - Legal Authority
 - Responsibilities include:
 - Survey IUs in jurisdiction
 - Issue permits to IUs (i.e., control IU discharges), Waste Haulers, and other Commercial entities discharging to the POTW

PRETREATMENT PROGRAM ROLES AND RESPONSIBILITIES

- **The POTW** (cont'd)
 - Responsibilities include:
 - Inspect IUs
 - Monitor discharges from IUs to the POTW
 - Receive and review IU reports
 - Enforcement
 - Annual reporting

PRETREATMENT PROGRAM ROLES AND RESPONSIBILITIES

- **Industrial Users**
 - Responsibilities include:
 - Comply with control mechanism requirements (CIUs)
 - Comply with POTW Local Limits and other POTW permit requirements
 - Self-monitoring
- **Waste Haulers**
 - No hazardous waste
 - Comply with POTW requirements

**PRETREATMENT PROGRAM REQUIREMENTS
APPLICABLE TO ALL POTWS**

• **40 CFR 122.42(b)**

- Provide notice of any new introduction of pollutants into the POTW that would be regulated via effluent limits or performance standards if directly discharged; and
- Provide notice of any substantial change in the volume or character of pollutants being introduced into the POTW

Note: Notice shall include information on the quality and quantity of effluent introduced into the POTW and any anticipated impact of the change in the quantity or quality of effluent to be discharged.

**PRETREATMENT PROGRAM REQUIREMENTS
APPLICABLE TO ALL POTWS**

• **40 CFR 122.44(j)(1)**

- Identify any Significant Industrial Users (SIUs) discharging into the POTW subject to PT Standards under section 307(b) of CWA and 40 CFR part 403.

**PRETREATMENT PROGRAM REQUIREMENTS
APPLICABLE TO ALL POTWS**

- **40 CFR 122.21(j)(6)(6)**
 - Submit information about industrial discharges to the POTW including:
 - The number of SIUs and CIUs discharging to the POTW; and
 - Name and mailing address of each SIU
 - Description of all industrial processes that affect or contribute to the SIU's discharge
 - Principal products and raw materials of the SIU that affect or contribute to the SIU's discharge
 - Average daily volume of wastewater discharged, indicating the amount attributable to process flow and non-process flow

**PRETREATMENT PROGRAM REQUIREMENTS
APPLICABLE TO ALL POTWS**

- **40 CFR 122.21(j)(6)(6)** (cont'd)
 - Whether the SIU is subject to local limits
 - Whether the SIU is subject to categorical standards & which category(ies) and subcategory(ies)
 - Whether any problems at the POTW have been attributed to the SIU in the past 4 ½ years.
 - Required information can be provided:
 - In the NPDES permit application –or-
 - Via an annual report within one year of the NPDES permit application –or-
 - Via a pretreatment program submitted for approval

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- Legal Authority
- Local Limits
- Procedures
- List of Industrial Users
- Enforcement (Enforcement Response Plan)
- Funding

See 40 CFR § 403.8

Note: Be sure your program has been revised to incorporate the 2005 EPA "Streamlining Rule" changes

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- **POTW Legal Authority**
 - Authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact
 - Typically established through Sewer Use Ordinance (SUO)
 - See EPA Model Pretreatment Ordinance
http://www.epa.gov/npdes/pubs/pretreatment_model_suo.pdf

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- **POTW Legal Authority Must:**
 - Provide authority to deny or condition discharges per 40 CFR 403.8(f)(1)(i)
 - Require IU compliance per 40 CFR 403.8(f)(1)(ii)
 - Control discharges through permit or similar means per 40 CFR 403.8(f)(1)(iii)
 - Control Mechanism (e.g., permit) must:
 - Contain statement of duration
 - Contain statement of non-transferability
 - Contain effluent limits based applicable general pretreatment standards in 40 CFR part 403, Categorical pretreatment standards, local limits, and State and local law

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- **POTW Legal Authority Must:**
 - Require compliance schedules to comply per 40 CFR 403.8(f)(1)(iv)
 - For the installation of technology required to meet applicable Pretreatment Standards and Requirements
 - The submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance by Industrial Users with Pretreatment Standards and Requirements
 - Provide authority for CA to Inspect, survey, and monitor IUs per 40 CFR 403.8(f)(1)(v)

**REQUIRED ELEMENTS OF POTW DEVELOPED
PRETREATMENT PROGRAM**

- **POTW Legal Authority Must:**
 - Provide authority to enforce PT program requirements per 40 CFR 403.8(f)(1)(vi)

 - Comply with confidentiality requirements per 40 CFR 403.8(f)(1)(vii)

**REQUIRED ELEMENTS OF POTW DEVELOPED
PRETREATMENT PROGRAM**

- **Discharges to Control Via Individual or General Permit or other Mechanism**
 - Required
 - SIUs – must include slug control plan
 - CIUs
 - Any other discharges that have reasonable potential to cause interference and/or pass through

 - Optional Controls
 - Non-significant IUs
 - Non-significant CIUs
 - Waste haulers
 - Groundwater remediation site discharges
 - Landfill leachate discharges

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- **Local Limits**

- Keep POTW in compliance with NPDES permit
- Protect the POTW and collection system
- Protect POTW personnel
- Improve sludge disposal options
- Must be technically-based
- Implement prohibitions at 40 CFR 403.5(a) and (b)
- Developed for each pollutant of concern
- Are enforceable Pretreatment Standards

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- **Local Limits Can Be:**

- Pollutant-specific limits
- Additional specific narrative prohibitions
- Industrial user management plans
- Case-by-case discharge limits

- **Implementing Local Limits**

- POTW selects its allocation method and applicable IUs
- Limits are applied at the end-of-pipe
 - Point of the IU's discharge to the collection system

**REQUIRED ELEMENTS OF POTW DEVELOPED
PRETREATMENT PROGRAM**

- **Local Limits Development Steps**
 - Determine Pollutants of Concern (POC)
 - Collect and Analyze Data
 - Calculate maximum allowable headworks loading (MAHL) for each pollutant of concern (POC)
 - Designate and Implement Local Limits
 - Address Collection System Concerns

See: EPA Local Limits Development Guidance -
EPA 833-R-04-002A, July 2004

**REQUIRED ELEMENTS OF POTW DEVELOPED
PRETREATMENT PROGRAM**

- **Pretreatment Program Procedures**
 - Identify and locate all possible IUs per 40 CFR 403.8(f)(2)(i)
 - Identify the character and volume of pollutants contributed to the POTW by IUs per 40 CFR 403.8(f)(2)(ii)
 - Notify IUs of applicable pretreatment standards per 40 CFR 403.8(f)(2)(iii)
 - Receive and analyze reports submitted by IUs per 40 CFR 403.8(f)(2)(iv)

**REQUIRED ELEMENTS OF POTW DEVELOPED
PRETREATMENT PROGRAM**

• **Pretreatment Program Procedures**

- Conduct random sampling, surveillance, and inspection events per 40 CFR 403.8(f)(2)(v)
- Conduct slug discharge evaluations per 40 CFR 403.8(f)(2)(vi)
- Investigate instances of noncompliance per 40 CFR 403.8(f)(2)(vii)
- Comply with public participation requirements per 40 CFR 403.8(f)(2)(viii)

**REQUIRED ELEMENTS OF POTW DEVELOPED
PRETREATMENT PROGRAM**

• **Enforcement Response Plans**

- Describes how remedies for noncompliance are obtained
- Reference legal authority to assess civil or criminal penalties, minimum \$1,000/day for each violation
- Must define POTW procedures to investigate noncompliance
- Must specify official, by title, responsible for each type of enforcement
- Defines types of enforcement for PT Program/IU Permit violations
- Defines process and time frame for escalating enforcement

See 40 CFR 403.8(f)(1),(2), & (5)

REQUIRED ELEMENTS OF POTW DEVELOPED PRETREATMENT PROGRAM

- **Pretreatment Program Funding**
 - POTW must have sufficient resources and qualified personnel to carry out the PT Program authorities and procedures per 40 CFR 403.8(f)(3)
 - PT Program submittal should specify:
 - Personnel required to implement the program (e.g., staff contractors)
 - Equipment required to implement the program (e.g., monitoring, lab)
 - Funding source(s) to implement the program (e.g., permit fees)

POTW COMPLIANCE MONITORING

- POTW to conduct monitoring independent IU self-monitoring
- Can conduct announced or unannounced
- Monitoring can be independently conducted or conducted during compliance inspections
- Independent POTW monitoring required to satisfy federal requirements
- Independent POTW sampling must provide defensible data, proper methods and techniques must be employed

See 40 CFR 403.8(f)(2)(v) & (vii)

POTW COMPLIANCE INSPECTIONS

- POTW must oversee IU activities
- SIU facility inspections must be conducted at least annually except:
 - Non significant CIUs (NSCIU), Evaluate status annually
 - Middle tier CIUs (MTCIU), Inspect once every two years
- See the EPA Pretreatment 101 Series at:
<http://water.epa.gov/polwaste/npdes/NPDES-Training-Courses-and-Workshops.cfm>

See also 40 CFR 403.8(f)(2)(v)

POTW PUBLIC PARTICIPATION REQUIREMENTS

- POTW must publish list of SIUs in significant noncompliance (SNC) annually per 40 CFR 403.8(f)(2)(viii)
- POTW s must provide public notice and opportunity to comment on local limits promulgation and modifications per 40 CFR 403.5(c)(3)
- The POTW or approval authority is required to provide public notice and opportunity to comment on substantial PT program modifications (e.g., adopting new limits, relaxing limits)

POTW RECORD KEEPING REQUIREMENTS

- Retain for minimum of 3 years:
 - Industrial waste questionnaires
 - Permit applications, issued permits, fact sheets
 - IU Inspection reports
 - IU submitted reports
 - IU and CA Monitoring data and laboratory reports

POTW RECORD KEEPING REQUIREMENTS

- Retain for minimum of 3 years: (cont'd)
 - Required plans including but not limited to slug control plan, sludge management plan, and pollution prevention plan
 - Records related to enforcement activities
 - All correspondence to and from the IU
 - Phone logs and meeting summaries

See 40 CFR 403.12(o)

POTW ANNUAL REPORTING TO THE WATER BOARDS

- Annual Reports to Water Boards to Include:
 - Summary of IU compliance status
 - Summary of conducted compliance, inspection and enforcement activities
 - Summary of pretreatment program changes/modifications not previously reported to the Water Boards
 - Any other information requested by the Water Boards

See 40 CFR 403.12(i)

IU NOTIFICATION REQUIREMENTS

- IUs Must Notify the POTW/Control Authority of:
 - Potential problems at the IU affecting discharge quality, including slug loadings per 40 CFR 403.12(f)
 - Of noncompliance with POTW permit and repeat sampling report per 40 CFR 403.12(g)(2)
 - Any change in the IU discharge per 40 CFR 403.12(j)
 - Any discharge of hazardous waste per 40 CFR 403.12(p)
 - Any bypass of IU pretreatment facilities per 40 CFR 403.17

CIU NOTIFICATION AND REPORTING REQUIREMENTS

- CIUs Must Notify the POTW/Control Authority of:
 - Production level changes per 40 CFR 403.6(c)(9)
 - Any material or significant change in alternative limit calculations conducted by the CIU per 40 CFR 403.6(e)
 - Notification of waived pollutant present per 40 CFR 403.12(e)(2)(vi)
 - Notification of middle-tier CIU per 40 CFR 403.12(e)(3)(iv)

CIU NOTIFICATION AND REPORTING REQUIREMENTS (cont'd)

- CIUs must provide the following reports to the POTW/Control Authority:
 - Baseline Monitoring Report per 40 CFR 403.12(b)
 - Compliance schedule progress reports per 40 CFR 403.12(c)
 - 90 day compliance report per 40 CFR 403.12(d)
 - Periodic Compliance Reports per 40 CFR 403.12(e)
 - Upset reports per 40 CFR 403.16

SIU REPORTING REQUIREMENTS

- Required SIU reporting to the POTW/Control Authority includes:
 - Periodic Compliance Reports per 40 CFR 403.12(h)
 - Slug Discharge Control Plans per 40 CFR 403.8(f)(2)(vi)
- **NOTE: All SIUs are required to conduct self-monitoring**

IU RECORD KEEPING REQUIREMENTS

- Required IU record keeping includes:
 - Records of IU monitoring activities and results
 - Documentation associated with BMP implementation
 - Any other POTW required records
- Records must be maintained a minimum of 3 years
- Records must be made available to POTW and Approval Authority for review and copying

See 40 CFR 403.12(o)

COMMON DEFICIENCIES IDENTIFIED IN INSPECTIONS/ AUDITS

- POTW not timely identifying IU self-monitoring deficiencies
 - IU has 30 days to re-sample and submit results to the POTW
- POTW permits containing incomplete 30-day resampling requirements
 - IU must submit re-sampling data within 30 days per 40 CFR 403.12(g)
- POTW not notifying Water Boards of PT program modifications
 - Substantial Modifications: see 40 CFR 403.18, Water Boards must approve before implementing
 - Nonsubstantial Modifications: notify Water Boards at least 45 days prior to implementing
- POTW not permitting SIUs/CIUs in their jurisdiction

COMMON DEFICIENCIES IDENTIFIED IN INSPECTIONS/ AUDITS (cont'd)

- POTW permits issued where permit limits don't match local limits (e.g., daily average, weekly average)
- POTW permits not including all applicable limits – local, categorical
- Limits for O&G not specifying type of O&G (e.g., mineral, animal & vegetable)
- Zero dischargers not properly permitted
- CIU permit issued by POTW not defining categorical limits
- Deficient enforcement response plan (ERP)
 - i.e., No escalation of enforcement specified for minor violations

COMMON DEFICIENCIES IDENTIFIED IN INSPECTIONS/ AUDITS (cont'd)

- POTW not following their ERP
 - i.e., Not initiating formal enforcement action as specified in the ERP
- Definitions in POTW program documents not consistent with federal definitions
- POTW compliance monitoring documentation deficiencies
 - e.g., Sample container type not specified, type of preservative used not specified, missing sampling data sheets
- POTW permits not specifying that all IU monitoring is to be submitted to POTW
 - All IU monitoring data required to be submitted per 40 CFR 403.12(g)(6)
- POTW mis-categorizing IUs

COMMON DEFICIENCIES IDENTIFIED IN INSPECTIONS/ AUDITS (cont'd)

- POTW permits for SIUs failing to require slug discharge control plans
- POTW failing to enforce for IU failure to develop slug discharge control plan
- SIUs failing to develop slug discharge control plans
- SIU permits that do not contain the notification requirements per 40 CFR 403.8(f)(2)(vi)
- IUs failing to notify POTW of limit violations within 24 hours
- Example Water Boards Enforcement Case
 - POTW without approved PT program failing to regulate SIU resulting in chronic POTW NPDES permit violations (DOD, TSS, etc) over multiple years
 - Industry closed and left jurisdiction when pressed to pretreat

PRETREATMENT NEWS

- **Final 2012 & Preliminary 2014 Effluent Limitations Guidelines Published by EPA**
 - See <http://www.gpo.gov/fdsys/pkg/FR-2014-09-16/pdf/2014-22062.pdf>
 - Comments due November 17, 2014
- **Dental Amalgam Proposed Rule**
 - See <http://water.epa.gov/scitech/wastetech/guide/dental/>
 - EPA proposing technology-based pretreatment standards for discharges from certain existing and new dental practices.