

Introduction to Pretreatment

Chuck Durham – Tetra Tech, Inc.

RWQCB Colorado River Board

Pretreatment Training June 2014



What is the Pretreatment Program?

- Pretreatment = pollutant control requirements for nondomestic sources discharging wastewater to sewer systems that are connected to publicly owned treatment works
- National program
- Implemented through Regions', States', and local programs



Common Acronyms

CWA – Clean Water Act

NPDES – National Pollutant Discharge
Elimination System

POTW – Publicly Owned Treatment Works

IU – Industrial User

SIU – Significant Industrial User

CIU – Categorical Industrial User

CFR – Code of Federal Regulations



Common terms and phrases

- Approved pretreatment program
- Approval Authority (AA)
- Control Authority (CA)
- Interference
- Pass through

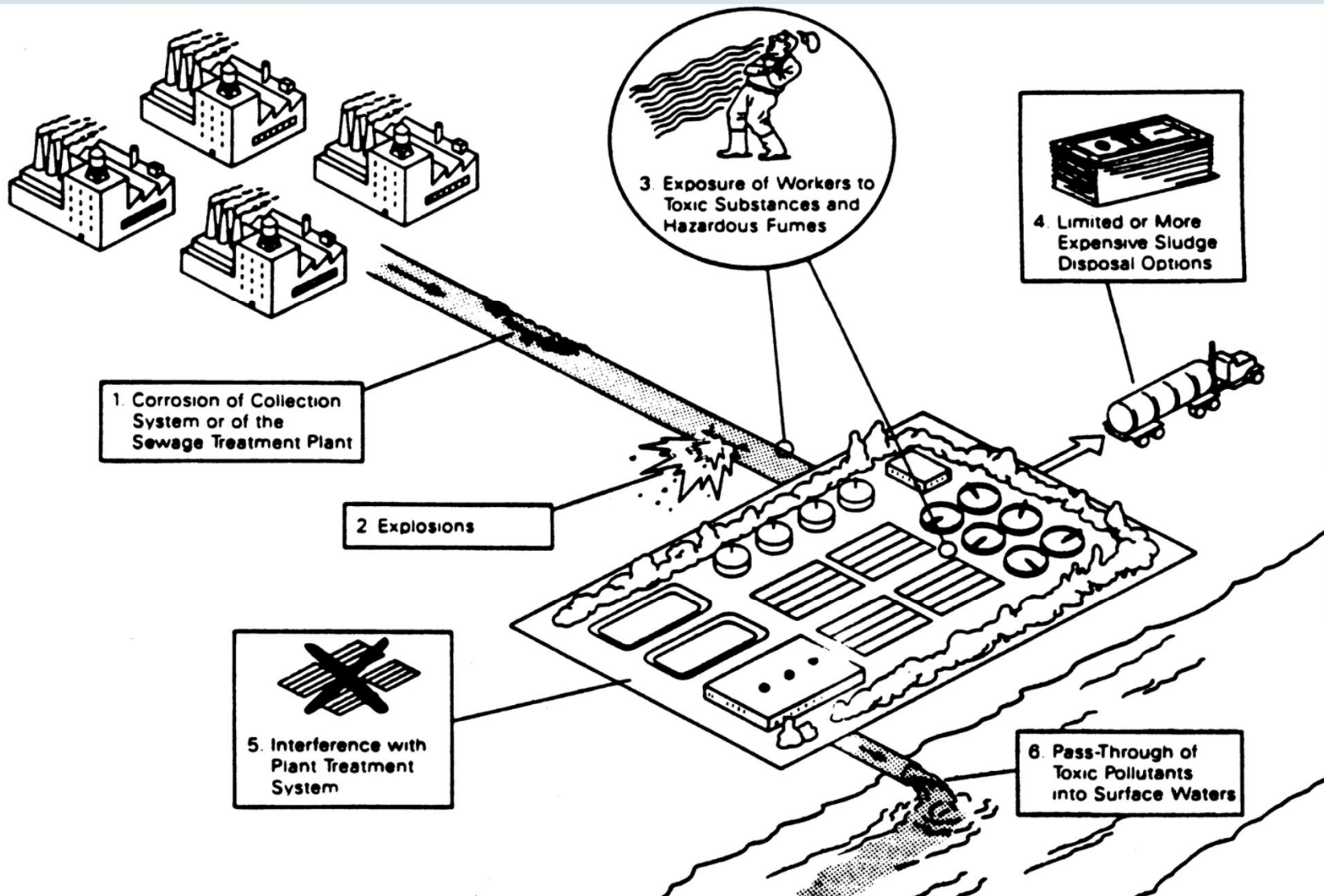
Definitions for pretreatment terms at 40 CFR 403.3



Purpose of the Pretreatment Program

- To prevent the introduction of pollutants into POTWs which will:
 - interfere,
 - pass through, and/or
 - be incompatible
- To improve opportunities to recycle and reclaim wastewaters and sludge
- To protect POTW workers





Who is affected?

- Approval Authority - AA (RWQCB)
- Control Authority - CA (POTWs)
- Industrial Users
- Waste haulers
- Commercial entities



Who is affected? (continued)

- Approval Authority - AA (RWQCB)
 - Goal: adequate implementation of pretreatment program requirements
 - Review Legal Authority of CA
 - Oversight responsibilities:
 - POTW pretreatment program implementation
 - SIU/CIU pretreatment program implementation



Who is affected? (continued)

- The POTW (Control Authority - CA)
 - Goal: prevent interference and pass through at plant
- CA has legal authority to implement program
- CA Responsibilities:
 - Survey IUs
 - Control (permits), IUs, waste haulers, and commercial entities
 - Inspection
 - Monitoring
 - Receive and review reports
 - Enforcement
 - Annual Report



Who is affected? (continued)

- Industrial Users
 - Goal: comply with local, state, and federal pretreatment standards and requirements
 - CIUs – self-implementing standards (effluent limits and reporting requirements)
- Responsibilities:
 - Compliance with control mechanism requirements
 - Self-monitoring
 - Reporting



Who is affected? (continued)

- Waste haulers and commercial entities
 - Goal: comply with local, state, and federal pretreatment standards and requirements
- Responsibilities:
 - No hazardous waste
 - Know, constrained discharge
 - Comply with POTW requirements



Program Overview



Objectives of the Clean Water Act

- Restore and maintain the chemical, physical and biological integrity of the Nation's waters
 - National goal to eliminate discharge of pollutants to navigable waters by 1985
 - Interim goal to provide waters that are fishable and swimmable by July 1, 1983
 - No discharge of toxic pollutants in toxic amounts



Pretreatment Program

- “Indirect” discharge to sewer
- Large number and variety of industry: electronics, aerospace, food processing
- Program Objectives are to Prevent:
 - Interference
 - Pass-through
 - Sludge contamination
 - No NPDES permits issued to “indirect” dischargers
 - See local agency control mechanisms (permits)



Pretreatment Program (continued)

- Basis for Discharge Limitations
 - EPA-developed categorical standards
 - 24 categories, BAT, PSES/PSNS
 - Early development concerned conventional pollutants
 - Consent decree in NRDC v. EPA required EPA to focus on 126 “priority pollutants” and industries discharging them
- Local Limits
 - Developed by POTW to meet program objectives and maintain compliance with its NPDES permit
- General and Specific Prohibitions in 40 CFR Part 403



40 CFR Part 403

- U.S. Code of Federal Regulations (CFR)
- Title 40 - Protection of the Environment
 - Chapter I - Environmental Protection Agency
 - Subchapter N - Effluent Guidelines and Standards
 - Part 403 - General Pretreatment Regulations for Existing and New Sources of Pollution

<http://www.gpoaccess.gov/cfr/>

or

<http://www.gpo.gov/fdsys/>



Pretreatment Program Implementation



Who must develop a program?

- POTWs with:
 - combined design flow > 5 million gallons per day (MGD), AND
 - receiving flow subject to Pretreatment Standards or
 - receiving pollutants which pass through or interfere
- Approval Authority may require program to be developed, regardless
 - CIU discharges to collection system
 - SIU causes pass through or interference



What is an SIU?

- Significant Industrial User is a
 - Categorical Industrial User (CIU) or a discharger that contributes
 - 25,000 gallons per day of process wastewater to collection system or
 - 5% of the hydraulic, organic or solids loading of the POTW or
 - Designated by the CA on the basis that the IU has a reasonable potential for affecting the POTW



Oversight Authority

- Approval Authority (AA) vs Control Authority (CA)
 - AA - entity that oversees CAs; RWQCB
 - CA - an entity that regulates IUs; POTW



Implementation Oversight by AA

- Approval Authority (AA) - RWQCB
 - Receive and review annual reports from CA
 - Conduct compliance inspections (PCIs)
 - Conduct compliance audits (PCAs)
 - Enforcement



Implementation Oversight by CA

- Direct oversight of IUs
 - Control mechanisms (permits)
 - Monitor and inspect
 - Receive and review reports
 - Enforcement



Local Pretreatment Programs

- § 403.8 Requirements of a POTW developed pretreatment program
- § 403.9 Contents of a POTW submission for requesting program approval
- § 403.11 Approval procedures for POTW pretreatment program
- § 403.12 Reporting Requirements for POTWs and SIUs
- § 403.18 Modifications of POTW pretreatment programs



Pretreatment Program Components

40 CFR 403.8

- Legal authority
- Local limits
- Procedures
- List of Industrial Users
- Enforcement (Enforcement Response Plan)
- Funding



Legal Authority

[40 CFR 403.8(f)(1)]

- State law
- Local regulations
 - Sewer Use Ordinance, “SUO” or
 - Rules and regulations



POTW Legal Authority

- Deny or condition discharges [403.8(f)(1)(i)]
- Require compliance [403.8(f)(1)(ii)]
- Control through permit or similar means [403.8(f)(1)(iii)]
- Require compliance schedules to comply [403.8(f)(1)(iv)]
- Inspect, survey, and monitor [403.8(f)(1)(v)]
- Enforce [403.8(f)(1)(vi)]
- Comply with confidentiality requirements [403.8(f)(1)(vii)]
- See EPA Model Pretreatment Ordinance

http://www.epa.gov/npdes/pubs/pretreatment_model_suo.pdf



What Procedures Must a POTW Pretreatment Program Have?

[40 CFR 403.8(f)(2)]

- Identify and locate all possible IUs [403.8(f)(2)(i)]
- Identify the character and volume of pollutants contributed to the POTW by IUs [403.8(f)(2)(ii)]
- Notify IUs of applicable pretreatment standards [403.8(f)(2)(iii)]
- Receive and analyze reports submitted by IUs [403.8(f)(2)(iv)]



What Procedures Must a POTW Pretreatment Program Have? (continued)

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



Control Mechanisms

[40 CFR 403.8(f)(1)(iii)]

- Control through permit, order or similar means, the contribution from each IU to ensure compliance with applicable pretreatment standards and requirements
- Can be achieved through individual or general permits



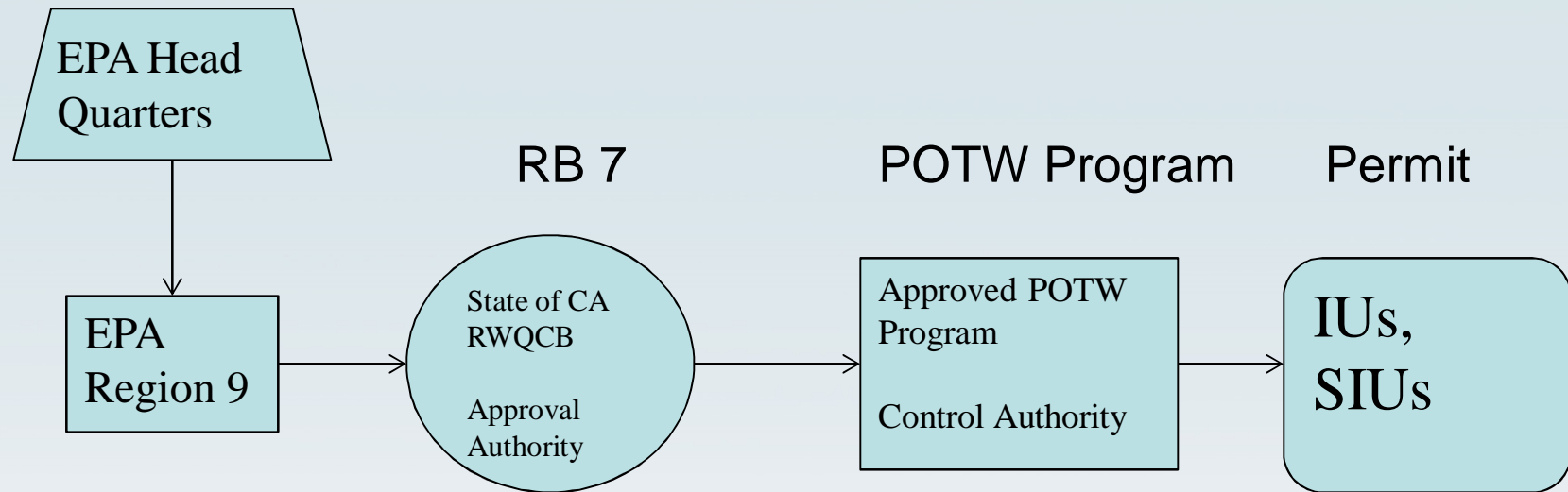
Who to Permit?

- Required permits
 - SIUs
 - CIUs
 - Other
- Optional permits
 - Non-significant IUs
 - Non-significant CIUs
 - Waste haulers
 - Groundwater remediation sites



Who issues the Permit?

Pretreatment Family Tree



POTW Compliance Monitoring

[40 CFR 403.8(f)(2)(v) & (vii)]

- Conducted by the POTW, independent from any IU self-monitoring (at least twice a year)
- Can be announced or unannounced
- Can be conducted independently or in conjunction with compliance inspections
- Used to satisfy the federal requirements
- Samples must be taken with sufficient care to provide defensible data



POTW Compliance Inspections

[40 CFR 403.8(f)(2)(v)]

- POTW must conduct surveillance activities
- POTWs are required to inspect each SIU at least annually except for:
 - Non-significant Categorical Industrial User (NSCIU)
 - Middle-tier CIU (MTCIU)
- Pretreatment 101 Series: POTW's Procedures for Conducting Compliance Inspections

http://cfpub.epa.gov/npdes/courseinfo.cfm?program_id=0&outreach_id=577&schedule_id=1123



Enforcement

[40 CFR 403.8(f)(1),(2),&(5)]

- Obtain remedies for noncompliance
- Authority to seek or assess civil or criminal penalties (minimum of \$1,000 a day for each violation by IU)



Enforcement Response Plans

- Reflect POTW's responsibility to enforce pretreatment requirements & standards
- Identify how the POTW will investigate noncompliance
- Specifies official responsible for each type of enforcement
- Specifies types of and time frame for taking escalating enforcement for anticipated types of violations



Funding/Resources

[40 CFR 403.8(f)(3)]

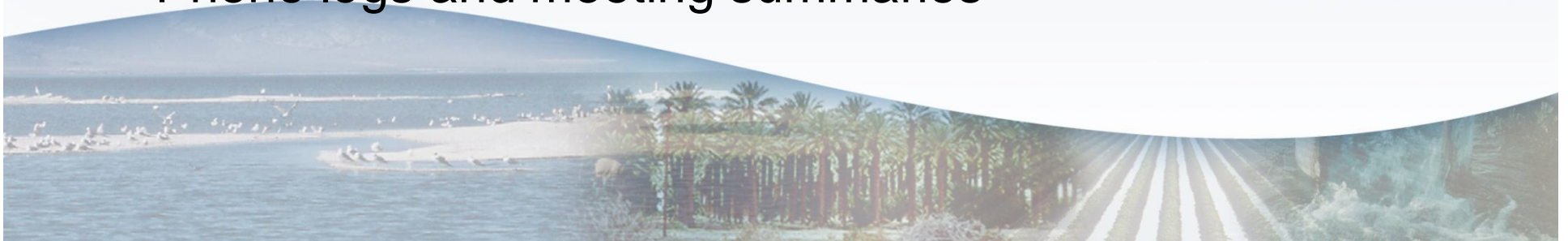
Paid for by Industrial Users

- Personnel
- Equipment
- Funding



POTW Record Keeping Requirements [40 CFR 403.12(o)]

- 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



POTW Public Participation

- Annual publication of SIUs in significant noncompliance (SNC) [40 CFR 403.8(f)(2)(viii)]
- Local limits development [40 CFR 403.5(d)(3)]



POTW Annual Reporting

[40 CFR 403.12(i)]

- A list of all the POTW's IUs
- A summary of the status of IU compliance during the reporting period
- A summary of compliance and enforcement activities (including inspections) conducted by the POTW during the reporting period
- A summary of changes to the POTW's pretreatment program that have not been previously reported to the Approval Authority
- Any other relevant information requested by the Approval Authority (NPDES Permit)



Industrial User (IU) Responsibilities



IU Notification Requirements

- Notification of potential problems, including slug loadings [403.12(f)]
- Noncompliance notification and repeat sampling report [403.12(g)(2)]
- Notification of changed discharge [403.12(j)]
- Notification of discharge of hazardous waste [403.12(p)]
- Notification of Bypass [403.17]



CIU Reporting Requirements

- Notification of production level change (20%)
[403.6(c)(9)]
- Notification of material or significant change in
the alternative limit calculation [403.6(e)]
- Baseline Monitoring Report [403.12(b)]
- Compliance schedule progress reports
[403.12(c)]



CIU Reporting Requirements (continued)

- 90-day compliance report [403.12(d)]
- Periodic Compliance Reports [403.12(e)]
- Notification of waived pollutant present
[403.12(e)(2)(vi)]
- Notification of middle-tier CIU
[403.12(e)(3)(iv)]
- Upset report [403.16]



Other SIU Reporting Requirements

- Periodic Compliance Reports [403.12(h)]
- Slug Discharge Control Plans [403.8(f)(2)(vi)]



All SIUs are required
to conduct
self-monitoring



Signatory and Certification Requirements

- Reports that must be signed and certified by an authorized IU representative [40 CFR 403.12(I)]
 - Baseline Monitoring Reports
 - 90-day compliance reports
 - Categorical Periodic Compliance Reports



IU Record Keeping Requirements [40 CFR 403.12(o)]

- Records (hard copies) must be maintained a minimum of 3 years
- Must be made available to POTW and Approval Authority (State) for review and copying
- Records include:
 - IU monitoring activities
 - Documentation associated with BMPs
 - Any other records required by POTW



Introduction to the National Pretreatment Program Manual

- Published in June 2011 (EPA-833-B-11-001)
- Updates the previous February 1999 version
- Available online at

http://www.epa.gov/npdes/pubs/pretreatment_program_intro_2011.pdf



EPA Update: What is HQ up to now?

- Guidance Manual Updates/Revisions
 - Procedures Manual for Reviewing a POTW Pretreatment Program Submission
 - Guidance Manual for POTW Pretreatment Program Development
 - Multijurisdictional Pretreatment Programs Guidance Manual
 - Completion of Appendices to IU Permitting Manual
 - Hauled Waste Guidance Manual Revision
- Regional EPA Office Assistance
 - Audit/Inspection Support
 - Training for Regions, States, and POTWs
 - Data Entry
 - Program Component Reviews



Questions?

