

An aerial photograph of a large industrial complex, likely a refinery or chemical plant. The facility is densely packed with numerous large, cylindrical storage tanks of various colors (white, grey, and brown). In the center, there are several tall, vertical distillation columns and other processing structures. The ground is a mix of paved areas, gravel, and some snow. In the background, there are hills and a road. The overall scene is industrial and complex.

# Pretreatment Program Management A Seamless Transition?

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# Presentation Overview

- Purpose and Disclaimer
- Salt Lake City Pretreatment Program Overview
- Staffing Changes and Program Transition
- Internal Process and Documentation Audit
- Sampling Program Evaluation
- Is IWS documentation useful?
- Toxic Organic Management
- Enforcement Evaluation
- Recordkeeping

# Purpose and Disclaimer

- The purpose of this presentation is to summarize challenges encountered by newly-hired pretreatment management and staff and provide an opportunity for rhetorical-evaluation of the inner-workings of your program.
- The topics presented herein are not intended to demean predecessors. Topics discussed are to illustrate administrative changes to methodologies and to prove for more robust documentation and lessen future challenges resulting from program transition(s).
- In no way, should these topics be construed to indicate noncompliance or failure to implement the requirements of the Salt Lake City Pretreatment Program.

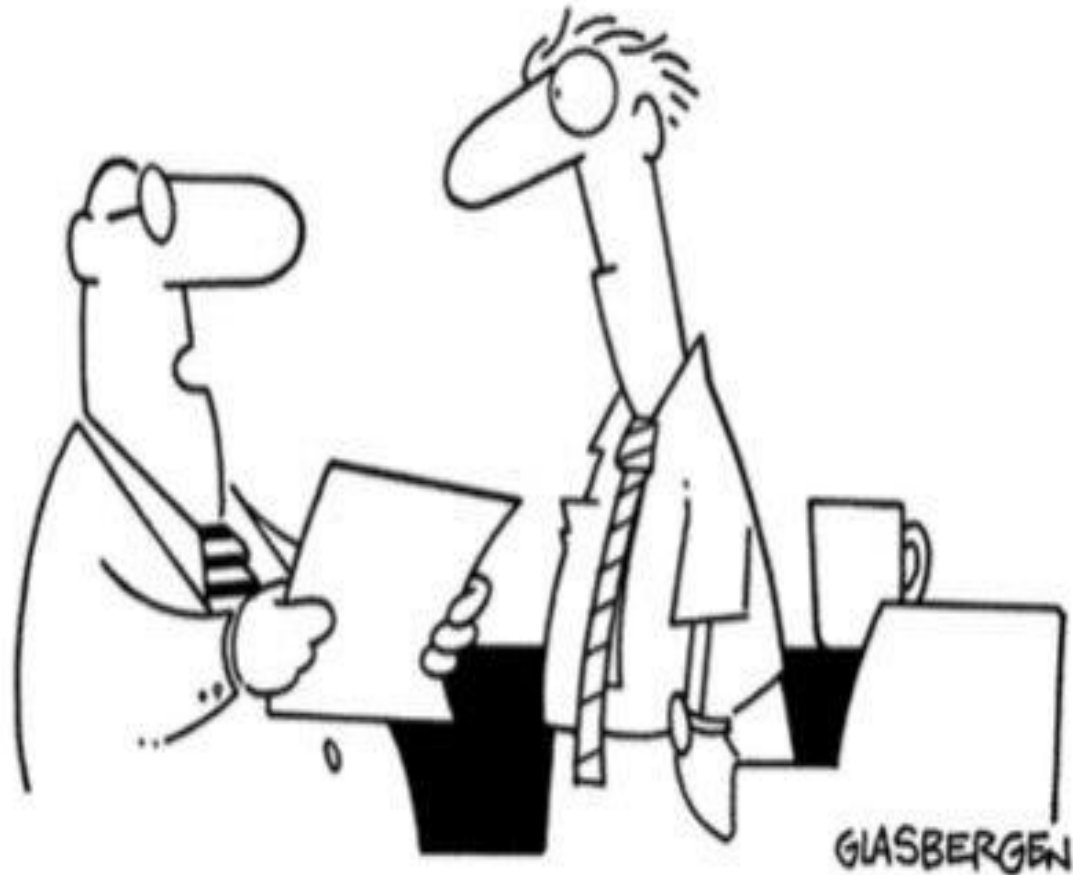
# Salt Lake City Pretreatment Program Overview

- ~190,000 residents
- ~28 million gallon per day/average flow
- ~50,000 sewer connections
- ~650 miles of sewer pipe
- ~100 permitted significant industrial users
- ~2.9 million gallons per day
- ~2,300 food service establishments
- Seven full-time pretreatment staff


# 2016/2017 Program Turnover

- In late 2016 - manager and permit writers leave
- 2017 hire replacement staff and contract with consultant to provide training
- Current staff of seven

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**“I want you to find a bold and innovative way to do everything exactly the same way it’s been done for 25 years.”**



“Culture does not change because we desire to change it. Culture changes when the organization is transformed; the culture reflects the realities of people working together every day.” - Frances Hesselbien

“If you are entrusted with bringing about change, you likely possess the knowledge needed to advance the organization, and you might have a plan – but knowledge is not enough. You have to bring yourself to each interaction in a deeply authentic way. People don’t care how much you know until they know how much you care.” – Doug Conant

# Internal Process and Documentation Audit

- Opportunity to review internal standard operating instructions (SOIs) and documentation procedures
- Review internal industrial user sampling program
- Review usefulness of documentation for IWS determinations
- Review internal implementation of Toxic Organic Management Plan and associated analytical data
- Review of permit basis documentation and monitoring frequencies
- Review of enforcement actions



# Review of SOIs

- SOIs provide protocols that when followed ensure decision-making and program records are complete and maintained
- Eleven SOIs > 1,000 pages of instructions
- Prepared in 2011 with some updates in 2014
- SOIs do not fully-capture current City protocols
- Disconnect between SOI and boots on the ground

# Updates to the SOIs

- SOIs were reviewed and updated to include:
  - Use of electronic pretreatment data management system (Linko)
  - Updated documentation forms (e.g. field sampling form, IWS, annual inspection reports, internal QA/QC)
  - Accurately reflect current City protocol
  - SOI matches what is actually performed
  - Easy to follow

# Sampling Program Evaluation

- Does program follow 40 CFR 136, 40 CFR 403, recommendations of EPA Industrial User Inspection and Sampling Manual for POTWs?
- What are internal QC/QA processes?
- How is equipment calibration documented?
- Is proper decontamination documented including collection and analysis of equipment blanks?
- Are appropriate samples collected to support decisions made in permit?
- Are unannounced and/or demand monitoring events performed and documented?
- How are split samples addressed? Compliance?
- How often is an internal QA audit performed for the sampling program? Are these audits documented?

# Improvement - Sampling Program

- What are internal QC/QA processes?
  - pH Meter Calibration – Standard verification
  - Sampler use and tracking
- How is equipment calibration documented?
  - Revised equipment calibration tracking sheets
  - Improved organization / layout of tracking sheets specific to each instrument
- Is proper decontamination documented including collection and analysis of equipment blanks?
  - Sampler / equipment blanks
  - Disposable sample tubing testing and documentation before use
- How are split samples addressed? Compliance?
  - Split sample results may be averaged if part of routine compliance sampling
  - Splitting samples with IU not recommended for annual program compliance sample or enforcement
- Internal audit routinely performed and documented for the sampling activities
  - Industrial User Sampling Field Audit Checklist

# Is IWS Documentation Useful?

- Review more than 100 initial commercial and industrial user questionnaires per year
- 30 – 40 permit applications
- 5 – 20 permits issued
- Review historical documentation; how useful are records? Have processes changed? Did the last inspector fully-evaluate processes and discharge? Are follow-up inspections recommended and complete?

# Is IWS Documentation Useful?

## *Lucky Planet Creamery*

### Check Interceptor

470 S 700 E

- The Interceptor was cleaned out.
- The Inceptor will be cleaned monthly.
- This place will mostly be retail maybe a little bit of production.
- The Interceptor is pretty old but looks like it's in working condition.
- Planning to open in about 6-8 weeks.
- IWS Short Form was given to Tom. Due:7/8/2010

## REVIEW OF DOCUMENTATION

Name and Address	Pete's Diesel Repair, 5701 West 700 South, SLC 84104 Patrick Warr 801-973-6780, or Lindsay Stout, 801-386-3353
Processes performed	This facility has opened 2013. The facility will be repairing and maintain diesel trucks, and is cleaning the interior of the tankers. Any repairs to the tankers are done at a different facility. The company is discharging ~100 gallons of wastewater to the sanitary sewer (Lindsay Stout) max if needed by cleaning food grade tanks. Food grade tanks require clean water; otherwise the system would use the re-circulated water. The pretreatment system will re-circulate the water continually. The only times the system would discharge into the SS is when fresh water is added to the system, and if all of the water in the system has to drained for O&M. The system has two 500 gallon holding tanks for the recirculation water.
Categorical ?	40 CFR 442 Transportation and Equipment Cleaning would apply to if the facility generates 100,000 gallons of TEC WW per year.
Application/BMR	Application submitted on 8/27/13
Inspection Questions	N/A
Action plan	Needs to be monitored to ensure the facility is not discharging 100,000 gallons or more of TEC wastewater.
Sampling details	N/A
Recommendation	Determination: Not Categorical at this time. No Permit Required. The company will have to re-evaluated on an annual basis to determine if the company meets the categorical requirements of 442.

# Is IWS Documentation Useful?

Salt Lake City Water Reclamation Facility  
Pretreatment Program

## Industrial Waste Survey Inspection Record of Determination

Date of Inspection	
IWS Survey Date	
Building Permit or Business License or Sewer Account #	PUT 2016-00592 and PUT 2015-00848
Reason for Inspection	<input type="checkbox"/> To determine if the facility requires a Wastewater Discharge Permit as a Categorical Industrial User (CIU), Significant Industrial User (SIU), or Nonsignificant Categorical Industrial User (NSCIU) <input type="checkbox"/> For Sewer Rate Determination/Category <input type="checkbox"/> Potential IU of Interest (Waste Hauler, FOG, Silver, Mercury) <input type="checkbox"/> Follow-up to previous IWS Inspection <input type="checkbox"/> Other: _____
Name and Address	
Contact	
Processes Performed	
Business Listing Code & Code Description	The facility operates under the following NAICS/SIC codes: NAICS Code #: SIC Code #:
Categorical Determination	Based on the information from the inspection and the Industrial & Commercial User Questionnaires / IWS Surveys: <input type="checkbox"/> No categorical processes are performed at the facility. <input type="checkbox"/> The following categorical process(es) are performed:
Permit Determination	The facility: <input type="checkbox"/> Does <input type="checkbox"/> Does Not perform any processes that are subject to the national categorical pretreatment standards as defined in 40 CFR 403.6. <input type="checkbox"/> Does <input type="checkbox"/> Does Not discharge an average of 25,000 gpd of process wastewater. <input type="checkbox"/> Does <input type="checkbox"/> Does Not contribute a process waste stream that makes up 5% or more of the average dry-weather hydraulic or organic capacity of the POTW. <input type="checkbox"/> Does <input type="checkbox"/> Does Not present a reasonable potential for adversely affecting the POTW's operations or violating any pretreatment standard / requirement.

COMPANY NAME – Record of Determination

Date:

Page 2

IU of Interest Determination	The facility is identified as a potential IU of Interest for the following reason: <input type="checkbox"/> Potential IU of Interest (Waste Hauler) <input type="checkbox"/> Potential IU of Interest (FOG) <input type="checkbox"/> Potential IU of Interest (Silver) <input type="checkbox"/> Potential IU of Interest (Mercury)
Slug / Spill Plan Determination	Slug/Spill Plan Required: <input type="checkbox"/> Yes <input type="checkbox"/> No Please Describe findings below: <i>It was observed during the inspection that all chemicals handled and stored correctly; in addition, no chemicals are stored near any drains. The facility does not present a potential to discharge slug loads to the sewer that will adversely affect the POTW's operations and/or personnel.</i>
Inspection Determination	A Wastewater Discharge Permit is not mandated/required at this time.
BMR / Permit Application Date	None
Pervious Inspections	None
Sampling Details	None
Recommendations	None
Next Inspection Due Date	<input type="checkbox"/> Two (2) Years <input type="checkbox"/> Five (5) Years <input type="checkbox"/> No follow-up inspection necessary
Pretreatment Inspector/Reviewer (Name & Date)	

# Permit Basis Documents

Evaluate decision-making criteria in permit basis documents (fact sheets)

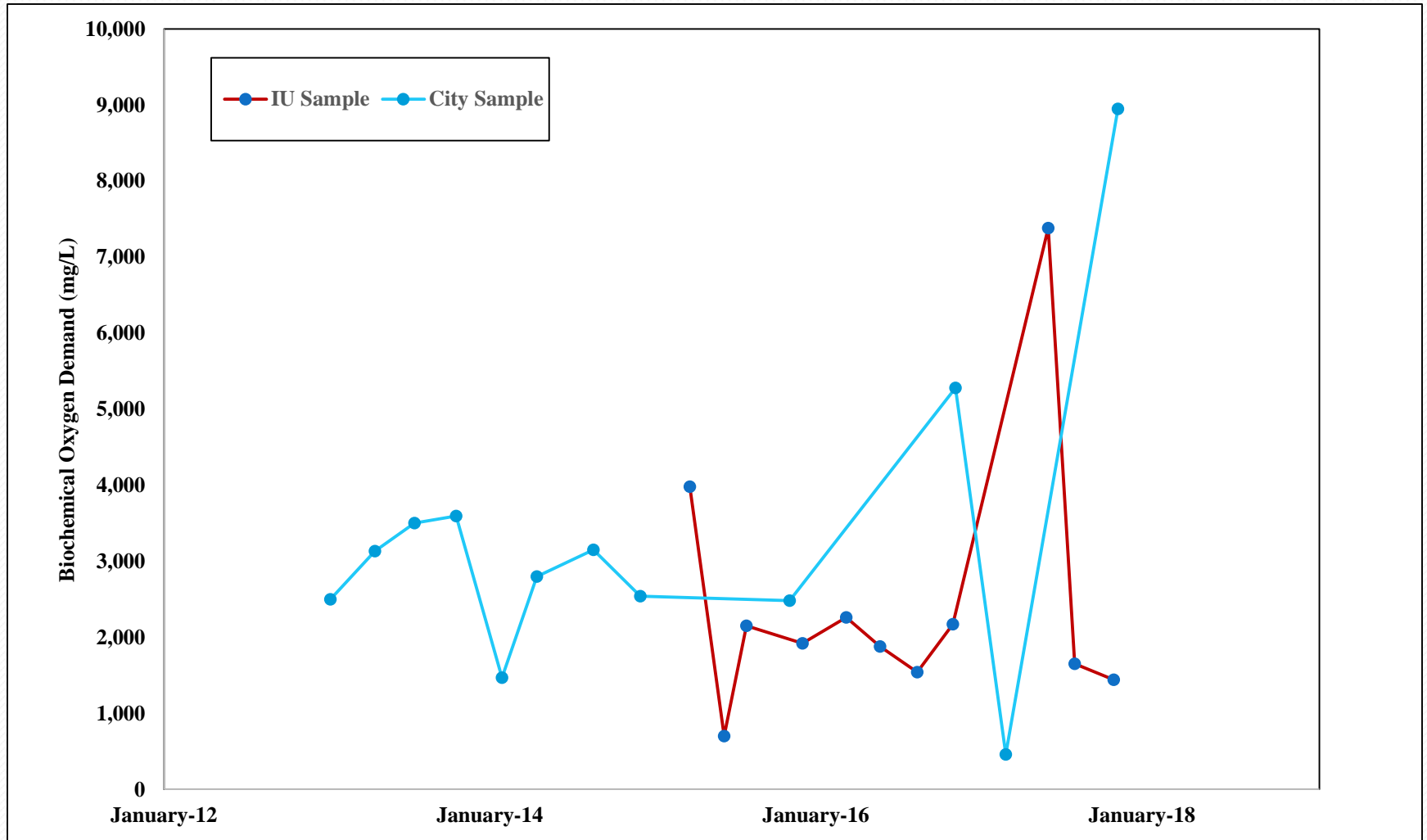
- Is description of IU sufficient for layperson to understand processes, permit justification, and rationale for permitting decisions?
- Are processes correctly identified?
- Is there a defensible justification for application of local limits and monitoring frequency?



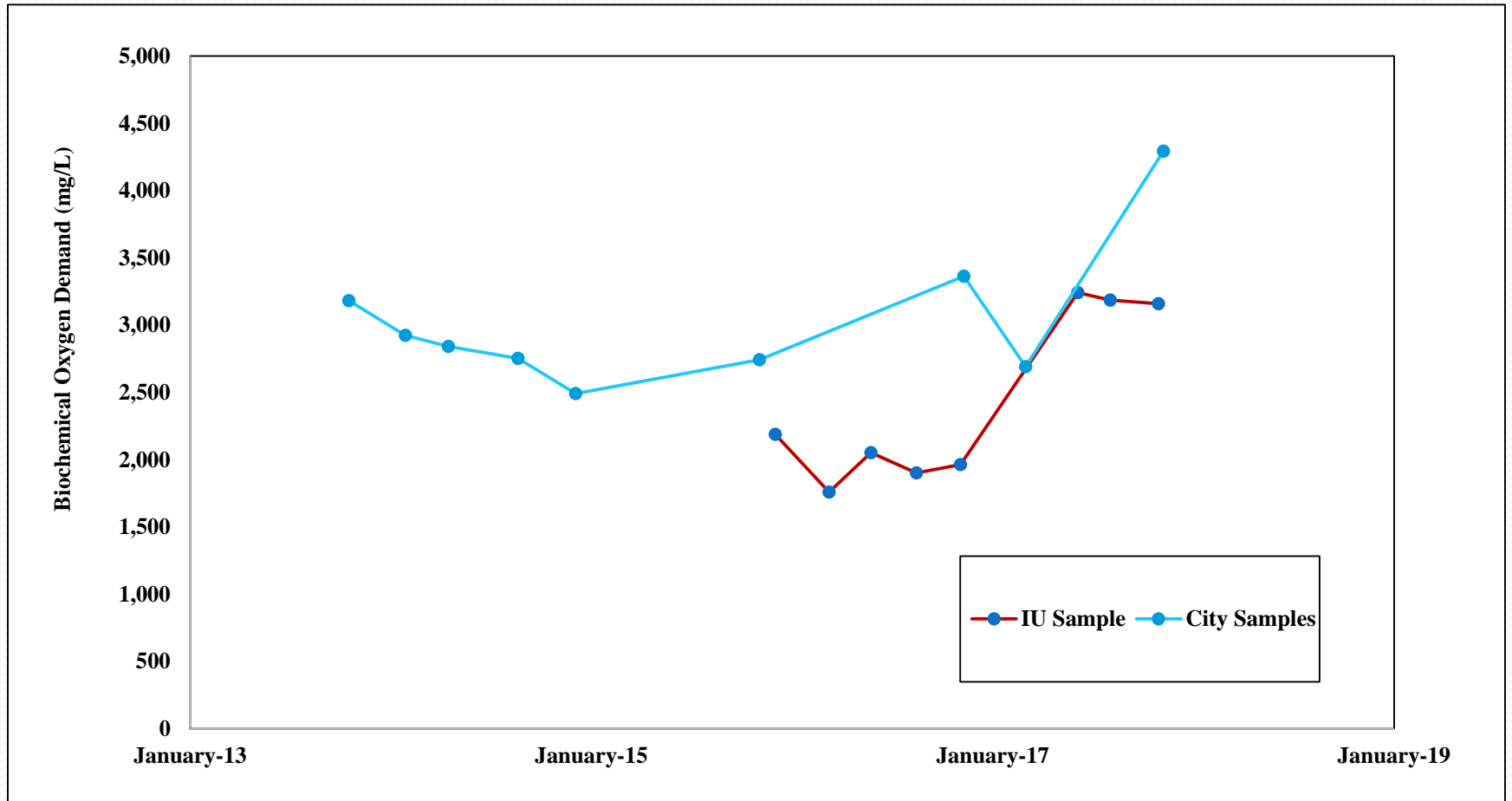
# Permit Basis Documents

- Why is specific monitoring frequency applied?
- What is the decision criteria for sample duration / pollutants?
- When is it necessary to change monitoring or potentially increase inspection frequency?
- Are decisions data-driven and documented?
  - Statistical analysis and stochastic evaluation

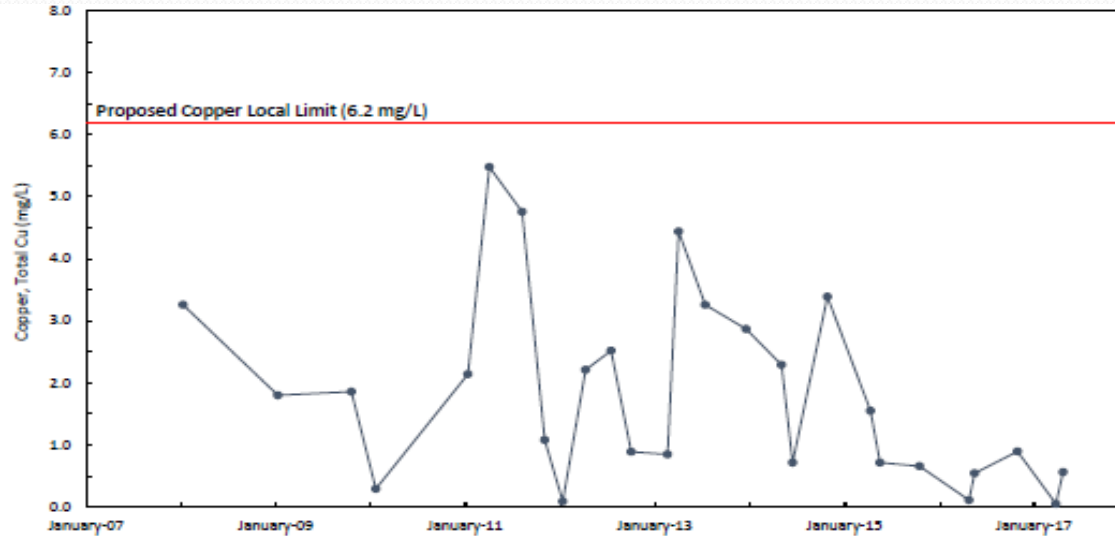
# Comparison of Specific IU Data



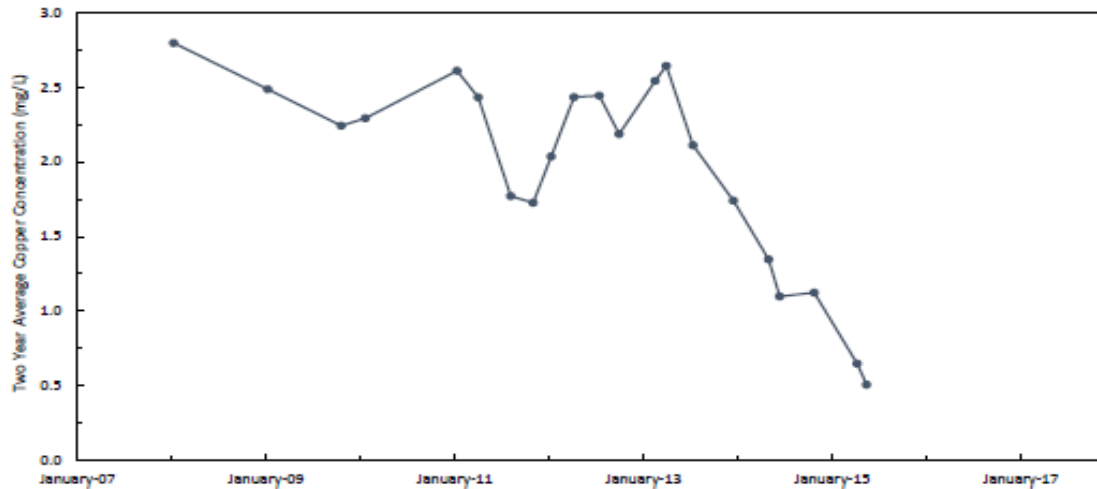
# Rolling Four-Sample Ave



# Monitoring Frequency Evaluation



Two Year Copper Concentration Moving Average



# Next Step Permit Decision Protocol

- Sampling Frequency Guidance Document
  - Guidance to determine IU sample frequency based on historic data, violations, reporting, and potential to violate standards
  - Large fluctuations in data sets likely indicates less controlled discharge
  - Predictive analysis to evaluate potential violations based on data sets (e.g., Monte Carlo simulations)
  - Consistent application of permit decisions for SIUs

# Evaluation of Toxic Organic Management Plans

How does our program make sure IU is operating in compliance with TOMP?

- Is there consistent data to support TOMP-approval?
  - At a minimum collect annual samples for appropriate TTOs
- Ensure IU reapplies for TOMP approval under new control mechanism (permit) not to exceed five-years

# Enforcement

How does the program apply enforcement?

- Is Enforcement Response Plan followed in each case?
- Are enforcement decisions documented and defensible?
- How are fines assessed and are they consistent for all users?

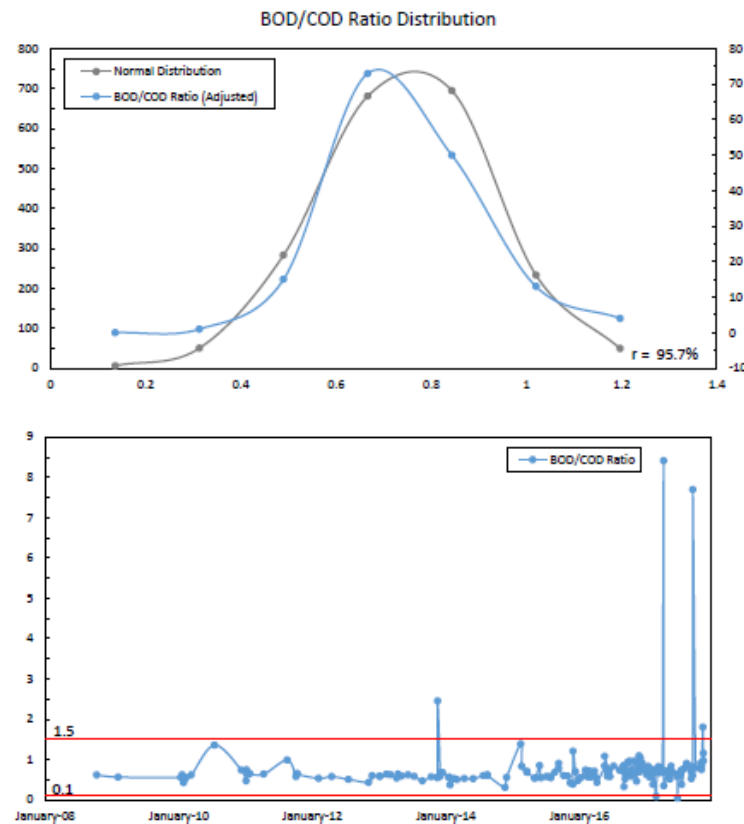
# Quality Assurance / Control

How does Program ensure QA / QC?

- Review datasets
- Develop QC checklists for record keeping and data entry
  - SIU folders with checklist
  - Sampling program
  - User reports
  - Permit decisions
- Working to develop third-party 10% QA back-check
  - 10% review of SIU folders and data entry



# QC Evaluation of Program Data



# Industrial User Folder Checklist

## Industrial User Folder Completeness Checklist

At least one per year and when a permit is issued, revised, or renewed, the following should be checked to ensure documentation in the hardcopy folders is complete and accurate.

Date: \_\_\_\_\_

Company/Permit Number: \_\_\_\_\_

Checked By	Yes/No/NA	Item	Comments
<b>Permit Tab</b>			
		Is the Permit in the folder?	
		Is the Permit Basis Document included in the folder?	
		Is the Permit Issuance/Renewal/Revision Check List included in the folder?	
		Is the transmittal letter in the folder (with mail receipts / green card)?	
		Is the previous Permit in the folder?	
<b>Correspondence Tab</b>			
		Is all Correspondence (letters, emails, phone conversations) included in the folder including mail recipes / green cards where applicable?	
<b>ERP Tab</b>			
		Are all enforcement actions documented in the folder?	
		Are all enforcement actions complete?	
		Are enforcement action completion letters in the folder?	
<b>Inspection Report Tab</b>			
		Are the last five years of Inspection Reports in the folder?	
		Have all action items or follow-up items noted in the reports been addressed?	
<b>Slug/SPCC/TOMP/Self-Monitoring Tab</b>			
		Is the Slug Plan in the folder?	
		Is the Slug Plan approval letter in the folder?	
		Is the Slug Plan check sheet included in the folder?	
		Is the IU self-monitoring plan (SMP) in the folder?	
		Is the SMP approval letter in the folder?	

		Is the Toxic Organic Management Plan (TOMP) in the folder?	
		Is the TOMP approval letter in the folder?	
		Is the TOMP check sheet included in the folder?	
<b>IU Compliance</b>			
		Are copies of the last five years of significant noncompliance (SNC) calculations in the folder?	
		Are records of compliance reports/actions and completion included in the folder?	
<b>Background Information Tab</b>			
		Is the most recent permit application in the folder?	
		Are related IWS records in the folder?	
		Is the original Baseline Monitoring Report (BMR) in the folder?	
		Is the current signatory form included in the folder?	
		Is the 90-day compliance report in the folder (CIU)?	
<b>Chemical Inventory Tab</b>			
		Are MSDS/SDS records in the folder (note may be included with the permit application or on CD or flash drive)?	
<b>Control Authority Sampling Tab (may be separate binder)</b>			
		Are the last five years of City-collected samples in the folder?	
		Are copies of the City field forms included in the folder?	
<b>PCR Tab</b>			
		Are the last five years of PCRs in the folder?	

\*Maintain this checklist in the Permit section of the IU binder and in the internal quality control section for each permittee on the server.

# Keys to a Seamless Transition

- Well developed decision-making processes
- Thorough documentation that will allow layperson to understand the who, what, when, why, and how for historic decisions
- A well maintained QA/QC program
- Documentation, documentation, documentation

# Questions

