

TRIBUTARY TRIBUNE

2005 EPA Administrative Order Impacts

Our last issue reported on the Administrative Order (AO) that was recently issued to the City of San José by the EPA. The AO outlines new compliance mandates and corresponding implementation deadlines directed at our Pretreatment Program (Program). The following table explains how these mandates could impact Industrial Users (IUs).

Mandate	Program Implication	IU Implication
<p>Review Sewer Use Ordinance.</p> <p>By January 31, 2006</p>	<p>Reviewing and update Sewer Use Ordinance, as needed.</p>	<p>IUs could receive new requirements. For example, zero dischargers could be regulated under a new permit process.</p>
<p>Re-evaluate adequacy of local limits.</p> <p>By June 30, 2006</p>	<p>Perform technical evaluation of local limits.</p>	<p>IUs could be asked to participate in a public review process.</p>
<p>Calculate new local limits, if needed.</p> <p>By June 30, 2007</p>	<p>Implement new local limits and amend IU permits.</p>	<p>IUs could receive amended permits based on the revised local limits.</p>
<p>Develop training plan for pretreatment inspectors.</p> <p>By June 30, 2005</p> <p>Implement training plan.</p> <p>TBD</p>	<p>Review and enhance existing training plan.</p> <p>Provide standardized training to all pretreatment inspectors on compliance monitoring, enforcement, and record keeping procedures.</p>	<p>Better-trained inspectors and more uniform performance.</p>
<p>Issue revised permits to all Significant IUs and zero dischargers.</p> <p>By June 30, 2007</p>	<p>Revise current permit format to include additional data elements.</p> <p>Reissue permits to all significant IUs.</p> <p>Develop a new process for permitting zero dischargers.</p>	<p>Significant IUs can expect to receive amended permits.</p> <p>Existing source metal finishing facilities under CFR 413 could be re-permitted as a new source under CFR 433, as appropriate.</p> <p>Zero dischargers could be regulated under a new permit process.</p>
<p>Ensure IU compliance with Pretreatment Program regulations including bypass prohibition.</p> <p>By June 30, 2005</p>	<p>Develop plan for improving compliance monitoring.</p> <p>Review and enhance existing surveillance monitoring plan.</p>	<p>IUs could be subject to increased inspections and/or surveillance monitoring.</p> <p>IUs could be required to modify plumbing and/or water usage practices.</p> <p>IUs could be required to submit slug discharge control plans.</p>

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The **Tributary Tribune** serves the cities of San José, Santa Clara, Milpitas, Cupertino Sanitary District, West Valley Sanitation District (including Campbell, Los Gatos, Monte Sereno, Saratoga), County Sanitation Districts 2-3, Sunol & Burbank Sanitary Districts

If you have questions on the Order, contact John Mukhar at (408)-382-8836 or by e-mail at: john.mukhar@sanjoseca.gov

Effects of Cyanide on the Plant

This is the second in a series of articles discussing how non-conventional pollutants, like cyanide, cause interference and adversely affect the San Jose/Santa Clara Water Pollution Control Plant (Plant).

The Plant is one of the largest and most advanced wastewater treatment facilities in the western United States, employing primary, secondary and tertiary treatments. The secondary treatment process uses bacteria and activated sludge to break down most organic material from the influent wastewater.

However, when elevated levels of a non-conventional pollutant like cyanide enters the Plant, as we experienced recently, the effects can be extremely detrimental.

For example, a cyanide discharge of 0.03 mg/l to the Plant can cause **interference** with the biological treatment process by affecting the bacteria that breakdown biological material. This can disrupt or inhibit the Plant, its treatment processes, and the sludge process.

At high enough concentrations or if present over a long period of time,

cyanide can “sicken” the bacteria used in the secondary treatment process. This can reduce the treatment effectiveness by causing a bacteria deficit. It could take weeks before a healthy bacterial balance is reestablished.

The Plant conducts regular influent and effluent sampling to detect non-conventional pollutants like cyanide. Since cyanide is not a naturally occurring component of wastewater,

cyanide detection in Plant influent indicates a discharge from an industrial source.

Electroplating and printed circuit board manufacturers are the primary dischargers of cyanide. Permitted IUs have a local instantaneous maximum limit of 0.5 mg/l for total cyanide. Federal limits also apply to categorical dischargers; these limits can range between 0.65 mg/l to 1.20

mg/l for a monthly average to 1.9 mg/l for a daily maximum, depending on the industry type.

If elevated levels of cyanide are detected, this usually means that illegal dumping or an illegal bypass has occurred. To trace the source of these illegal discharges, pretreatment program inspectors can follow up with surveillance monitoring; this is discussed in more detail in the next article.

FOR YOUR SAFETY

• ***A chemical could have 9,999 mg/l of cyanide and it doesn't even have to be listed on an MSDS!***

◆ ***For your safety, do not rely on an MSDS to verify that a solution is cyanide-free as manufacturers can change the mix of stabilizing chemicals (such as cyanide) under 1.0% in a solution without notifying the purchaser.***

• ***Hand-held, qualitative test kits can provide false results for cyanide due to chemical interference.***

◆ ***For your safety, have the cyanide test kit results verified by a certified lab.***

Surveillance Monitoring

The purpose of a surveillance monitoring program is to detect and deter intentional and accidental bypassing activities by IUs. Federal regulation 40 CFR 403.5(d) prohibits the bypassing of treatment.

As a Publicly Owned Treatment Works (POTW), we have a responsibility to

ensure worker safety, manage effluent discharge standards, and protect our collection system and treatment works. Therefore, we conduct routine surveillance monitoring to identify illegal discharges.

Our surveillance monitoring program includes three key activities:

Trunkline Monitoring

A complex 300 sq. mile network of sewer piping serves the Plant. Sewer laterals collect sewage from groups of homes and other buildings and conduct the flow to sub-mains, which then join to form trunklines that deliver the flow to the Plant. Essentially, the network is a



“tree” of sewers; the Plant is the root, the trunklines are the trunk, and sewer piping branches throughout the tributary area.

Trunkline monitoring allows us to identify the “branch” where the pollutant of concern could be entering the system.

The detection of elevated levels of a pollutant of concern along a given trunkline can trigger a search for potential companies upstream of the line, making them prime candidates for surveillance monitoring.

Of course, IUs are identified for surveillance monitoring by other means too. For example, our inspectors identify and recommend facilities with a high potential for bypassing treatment through routine

inspections. Though uncommon, a tip of illegal dumping can also trigger surveillance monitoring.

Surveillance Monitoring

Facilities selected for monitoring generally do not receive advance notice. We could conduct the monitoring at anytime over the course of several days, weeks, or even months.

Samplers are typically set up in the sewer line near the facility to collect wastewater samples. Our in-house certified laboratory analyzes the collected samples for type and quantity of pollutants present.

Inspectors also collect samples from property cleanouts, perform dye tests, and conduct additional onsite inspections,

as necessary, to look for evidence of bypassing or illegal dumping.

Sample results and other evidence collected during surveillance monitoring are used to make compliance enforcement decisions.

Enforcement

If intentional bypass activity or illegal dumping is confirmed, pretreatment program inspectors will follow up with enforcement actions, which can range from a verbal warning to monetary fines. Depending on the magnitude of the violation, we could refer the findings to the City or District Attorney’s offices for prosecution.

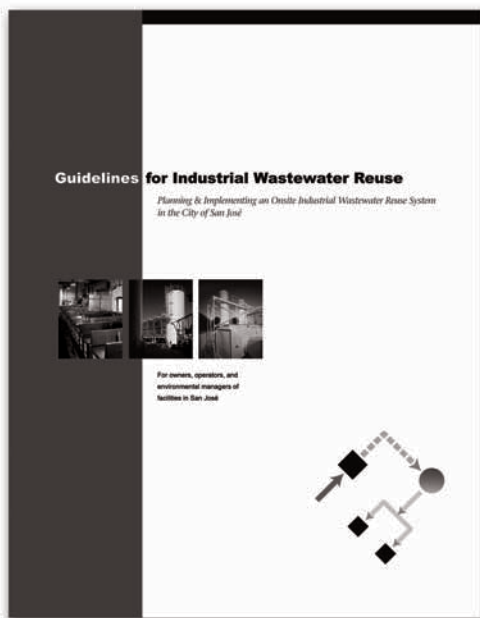


Currently, we are conducting an extensive surveillance monitoring effort. In conjunction with implementing trunkline monitoring for cyanide, we are monitoring those companies that use cyanide processes through a sampling program.

For more information about the Surveillance Monitoring Program, please contact Phil McGinnis at **(408) 382-8853** or by e-mail at: phil.mcginis@sanjoseca.gov

NEW! For San José Businesses Guidelines for Industrial Wastewater Reuse

~ Now Available ~




The City of San Jose’s Environmental Services Department (ESD) in conjunction with the Planning, Building, and Code Enforcement Department (PBCE) recently published a booklet to assist businesses with implementing onsite industrial wastewater reuse projects.

The *Guidelines for Industrial Wastewater Reuse* provides examples of reuse options, describes the documentation needed for plan checks and permit approvals, and leads you through the multi-department approval process.

Existing businesses that implement industrial wastewater reuse projects may qualify for a financial rebate through the **Water Efficient Technologies (WET) program**.

For a **free copy** of the booklet or more information on the WET program, contact **Geoff Blair at (408) 382-8842** or by e-mail at geoffrey.blair@sanjoseca.gov. For your convenience, the booklet is also available in PDF format on our website at:

www.sanjoseca.gov/esd/pub_res.htm

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In accordance with the Americans with Disabilities Act, City of San José Environmental Services Department materials can be made available upon request in alternative formats, such as Braille, large print, audio-tape or computer disk. Requests may be made by calling (408) 945-3000 (Voice) or (800) 735-2929 (CRS).



www.sanjoseca.gov/esd

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Local Discharge Limits To Undergo Review

Periodically, we evaluate the local discharge limits to ensure that they remain protective and to determine whether they should be revised or reallocated to meet changing conditions.

Some changes have occurred in IU and loading characteristics since the local limits were last reviewed in 1994. Since then, many IUs have closed or relocated their operations outside of the Plant's service area.

In addition, copper and nickel loadings in 2004 was significantly lower than loadings in the mid 90's.

This is an opportunity for us to consider a restructuring of the current Group I, II, and III tiered system and to update our sewer use ordinance.

Selected IUs have been invited to a focus group meeting on June 28 to discuss the project details. If you are interested in participating, contact Heidi Geiger at **(408) 382-8847**.

All permitted IUs will be invited to participate in a public commenting process at a later date once the final draft report becomes available.



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