



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX – PACIFIC SOUTHWEST REGION
75 Hawthorne Street
San Francisco, CA 94105-3901

Oct 19, 2011

In Reply Refer To: WTR-7

Mr. Sam Wool
Vice President
Coast Creative Nameplates,
A Division of Coast Engraving Companies, Inc.
1097 N. Fifth Street
San Jose, California 95112

Re: August 19, 2011 Clean Water Act Inspection

Dear Mr. Wool:

Enclosed is the October 17, 2011 report for our inspection of the Coast Creative Nameplates facility of Coast Engraving Companies at the above address in San Jose, CA.

The main findings are summarized below:

1. This facility is subject to the federal categorical standard for metal finishing, 40 CFR 433, because of its chemical etching process.
2. Over the past few years, the facility has had some problems with consistent compliance with the local cyanide limit and federal and local zinc limits. It is unknown whether the facility can comply consistently with the federal total toxic organics (TTO) limit since the facility used an incorrect test method to analyze for TTO levels.
3. This facility has not been able to provide a reason for its inability to comply consistently with applicable pretreatment limits. It is currently under a compliance agreement with the City of San Jose.

By November 30, 2011, please submit a short response letter to the Summary of Findings in Section 3.0 of this report. Your letter should include an individual response to each of the numbered findings in Section 3.0.

Please send your letter to the attention of Anna Yen at EPA (and include the code "WTR-7" in the address above), with copies to the City of San Jose and the San Francisco Bay Regional Water Quality Control Board.

We would like to thank you for your cooperation during the inspection. If you have any questions, please call Anna Yen at (415) 972-3976 or e-mail her at yen.anna@epa.gov.

Sincerely,

<Original
signed by>

Ken Greenberg
Chief, Clean Water Act Compliance Office

Enclosure

cc (enclosure by email):

Rene Eyerly, City of San Jose, Environmental Services Department

Michael Chee, Regional Water Quality Control Board, San Francisco Bay Region

**U.S. Environmental Protection Agency
Region 9
Clean Water Act Compliance Office**

Industrial User Inspection Report

Industrial User: Coast Creative Nameplates, a Division of Coast Engraving Companies, Inc.
Industrial User Address: 1097 N. Fifth St., San Jose, CA 95112
Inspection Date: August 19, 2011
EPA Region 9 Inspector: Anna Yen, Environmental Engineer
Water Division, CWA Compliance Office
City of San Jose Inspector: Casey Fitzgerald, Environmental Inspector
Facility Contact During Inspection: Sam Wool, Vice-President
Report Date: October 17, 2011

Report prepared by Anna Yen

1.0 Scope and Purpose

The purpose of the industrial user inspection on August 19, 2011 was to determine the pretreatment standards and requirements that apply to this facility and to ensure compliance with those standards and requirements.

This facility is an industrial user which discharges to the local publicly owned treatment works (POTW), the San Jose/Santa Clara Water Pollution Control Plant.

1.1 General and Process Description

Operations began at this facility in the late 1970s. Coast Creative Nameplates (“Coast”), which is a division of Coast Engraving Companies, Inc. produces nameplates, labels, and similar products. Coast performs etching to create some of these products. It does not own any of the products it manufactures. Therefore, as defined in 40 CFR 433.11(c), Coast is a job shop.

For some of its products, Coast starts off with such raw materials as polycarbonate and mylar, which could have adhesives already affixed to the pieces. For other products, Coast orders magnesium blocks and magnesium photoengraving plates as the starting materials.

Coast has a die cutting machine to cut raw materials to the required sizes. This machine does not use water for the cutting function or for cooling purposes.

For the magnesium blocks and plates, a film is adhered to one surface with the design or lettering that the customer has requested. A light exposure unit exposes the film. The film is then developed by washing the piece in a plastic tray with a chemical specifically produced for use with magnesium photoengraving (AQ-Blu Developer Concentrate). *See Photos 1 and 2.* The piece is then placed in one of two large etching machines. (At the time of the inspection, Coast stated that one of the large machines was not being used because it was broken.) A smaller etching machine is also used but not as frequently. The etching machine contains a nitric acid and water bath. More specifically, the solution is comprised of approximately 80% water, the remaining 20% is 16 liters of X-flex, which is an etching additive, and 32 liters of nitric acid. The bath is heated to approximately 80 to 85°F. The piece is not actually immersed in the bath; instead, paddles inside the machine agitate the bath so that the liquid splashes onto the piece. *See Photos 3 and 4.* Coast stated that it keeps a log of the pieces processed in the etching machine.

Coast replenishes the bath periodically by adding nitric acid. Once the bath becomes exhausted, the liquid is pumped to a stainless steel holding bin in the same room. *See Photo 5.* This is true for each etching machine. From this holding bin, the liquid is pumped in controlled amounts to a 350-gallon holding tank in the adjacent room. This 350-gallon holding tank is part of the wastewater treatment system. *See Photo 6.*

Near the wastewater treatment system is a long, industrial sink for washing screens. *See Photo 7 and 8.* Screens are used for hand imaging a pattern onto film. Screens are washed off with a detergent (Screen Clean) and water. All drainage from this sink flows into a small mesh-covered plastic bin. *See Photo 9.* This liquid is then pumped to the 350-gallon tank. Coast manages the makeup of the wastewater in the 350-gallon tank so that it is approximately 20% sink drainage and 80% etching machine spent solution.

Coast's film processor machine is located in a different room than the main process area. This machine is used only once a day for approximately 10-15 minutes. The customer sends the file, and Coast runs the film through the machine. The developer and fixer solution, once spent, is collected in a hazardous waste plastic drum, to be hauled offsite for hazardous waste disposal. *See Photo 10.* Based on hazardous waste manifest records, Coast generates approximately 90 gallons of silver-based hazardous waste from this machine every few months.

In a room on the other side of the wall from the wastewater treatment system is the sample point. *See Photos 11 and 12.* Nearby is an industrial sink, also used for washing

screens, which is plumbed to drain to the treatment tank of the wastewater treatment system. *See Photos 13 and 14.* In the past, Coast had created an illegal discharge point by sending untreated wastewater through a hole in the wall to this sink. This sink, at that time, discharged to the local sewer system. See Section 2.2 for details on the illegal wastewater discharge.

Onsite Wastewater Treatment System

See Section 1.3

1.2 Facility Wastewater Sources and Other Wastes

Coast generates the following wastewaters:

- Spent etching machine bath
- Sink drainage from washing screens
- Photoengraving solution and wash waters
- Mop wash water

The above listed wastewaters are all sent to an onsite wastewater treatment system. The treated wastewater collects in a sample box. The discharge pipe from the wastewater treatment system to the sample box is controlled by a valve. Coast is a batch discharger, discharging approximately 400 gallons per batch on a weekly basis.

1.3 Facility Process Wastewater Treatment System

Once the 350-gallon holding tank is almost full, the contents are pumped by submersible pump (which sits inside the holding tank) and hose to an adjacent 250-gallon treatment tank. *See Photo 6.* Mop wash water from mopping the floors of the process areas, approximately once per week, is also sent to the treatment tank. Caustic is mixed with the appropriate amount of water in a bucket and poured manually into the treatment tank. Polymer is also added into the treatment tank. The treatment tank contains an air sparger for mixing. Coast checks the pH with a pH kit, checking for a pH of 9.1. If the pH is satisfactory, Coast turns the air off and allows the contents to sit for 30-40 minutes. Coast then pumps the contents of the tank through a filter press.

The filtrate is sent to the large holding tank (approximately 1200 to 1400 gallons), which drains to the sample point and ultimately to the local sewer system. *See Photos 15 and 16.* The filter cake is transferred to a nearby holding bin for subsequent transferal to a one-cubic-yard cardboard box designed for such waste and disposed of offsite as hazardous waste.

The PVC lines conveying the filtrate from the filter press to the large holding tank were outfitted with two filter housings. Coast stated that these were polishing filters but the housings were presently empty because of operational problems. Coast stated that they plan to install new filters. Coast said that it will also reconfigure the PVC piping as the configuration is not straightforward and unnecessarily complex.

The treated wastewater in the large holding tank flows to a sample box on the other side of the wall. The discharge pipe from this holding tank to the sample box is controlled by a valve. *See Photos 11 and 12.* The City of San Jose (“the City” or “San Jose”) requires Coast to test its wastewater for pH before batch discharging to the local sewer system. Coast discharges on a weekly basis, approximately 400 gallons per batch.

1.4 Wastewater Discharge

Wastewater from this facility discharges to the San Jose/Santa Clara Water Pollution Control Plant. As lead agency of a regional joint powers authority, the City of San Jose operates the wastewater treatment plant, which is subject to requirements under an NPDES permit (No. CA-0037842) issued by the Regional Water Quality Control Board.

2.0 Compliance with Federal Categorical Standards

This facility is subject to the federal categorical standard for metal finishing, 40 CFR 433. Therefore, it is a categorical industrial user (CIU). The chemical etching performed at this facility triggers applicability of this categorical standard. Coast was discharging under a City-issued wastewater discharge permit in the 1980s. At that time, Coast was subject to 40 CFR 413. Coast claimed to be a zero discharger beginning in the 1990s. However, the City discovered in August 2009 that Coast was discharging to the local sewer system through an illegal discharge point, and the City required Coast to submit a permit application. The wastewater discharge permit that the City subsequently issued to Coast is the current permit. The City has permitted this facility as a new source, listing the “Pretreatment standards for new sources” in 40 CFR 433.17 as the applicable federal limits. See Section 2.2 for more details on the permitting history and the City’s enforcement actions.

An industrial user is subject to the federal categorical standard for metal finishing if it performs any of the following six core operations listed in 40 CFR 433: electroplating, electroless plating, chemical coating, chemical milling/etching, anodizing, and printed circuit board manufacturing.

The facility has shown inconsistent compliance with federal total toxic organics (TTO) and local cyanide limits in 2010, and with local and federal zinc limits in 2011. In addition, Coast has been late, on numerous occasions, in submitting reports required by federal pretreatment standards. EPA reviewed monitoring records of August 2009 through July 2011. Out of a total of 7 samples taken either by Coast or San Jose, the facility was out of compliance with the federal TTO limit on 2 days.¹ Out of a total of 9 samples pulled either by Coast or San Jose, the facility was out of compliance with the federal zinc limits (both daily and monthly) on 2 days.

Coast has not been able to provide a reason for its inability to comply consistently with

¹ EPA has since learned from the City that Coast used an incorrect test method to analyze for TTO. Therefore, the test results are invalid, and Coast did not comply with the monitoring requirements of 40 CFR 403.12.

the applicable pretreatment limits.

2.1 Compliance with Other Federal Pretreatment Requirements

This facility is a categorical industrial user (CIU) and, therefore, is also a significant industrial user (SIU) because it is subject to a federal categorical standard. Like any industrial user, it must comply with pretreatment requirements in 40 CFR 403, including, but not limited to, national prohibitions in 40 CFR 403.5 and reporting requirements in 40 CFR 403.12. Note that some requirements in 40 CFR 403 are applicable specifically to SIUs and some even more specifically to CIUs.

2.2 Compliance with Local Limits and Actions by the City

The facility's most recent pretreatment permit issued by the City of San Jose is Industrial Wastewater Discharge Permit No. SJ-612B, which names "Coast Engraving, Inc." as the permittee. The facility's sample point, as indicated by description in the permit, is located "after treated wastewater holding tank, after all treatment, and immediately prior to final discharge to the sanitary sewer." The facility's sample point is also indicated on a diagram in the permit. Though the diagram does not show much detail, the sample point location seems to be slightly inaccurate on the diagram. Based on observations during the inspection, it is a small clear collection bin which is located on the other side of the wall from the onsite wastewater treatment system. The facility's permit requires Coast to sample semiannually.

The City has issued numerous enforcement notices and penalties to Coast over the past couple of years. Coast claimed to be a zero discharger prior to the current permit issued May 24, 2010. However, in 2009, the City discovered that Coast was discharging industrial wastewater to the local sewer system through an illegal discharge point. Coast had drilled a hole through the wall separating the wastewater treatment system from the current sample point, allowing its untreated wastewater to flow into a sink which discharged directly to the local sewer system. This hole was covered up by steel and wooden plates attached to the wall. *See Photos 17-19.*

The City referred Coast to the City Attorney's office for further enforcement for falsification of information and discharging without the required permit. Since then, the City has issued a verbal warning, a warning notice, notices of violation, and two \$500 fines ("administrative citations") for late submittal of required reports. The City has also issued notices of violation and administrative citations to Coast for violations of local limits for cyanide and zinc as well as violations of federal limits. In July 2011, the City held a compliance meeting with Coast. Coast is currently under a compliance agreement which specifies that Coast must sample monthly for three months for TTO, cyanide, and metals; submit procedures for treatment system operation and monitoring; submit an updated solvent management plan; submit a slug discharge prevention plan; and attend the San Jose/Santa Clara Water Pollution Control Plant Industrial User Academy. All but the last requirement are due by October 31, 2011.

Following up with the City after the inspection, EPA has learned part of Coast's permitting history. Beginning with the 1980s, following are the major permitting-related events: Coast was discharging under a City-issued wastewater discharge permit. In October 1989, the City revoked the permit because of a high level of non-compliance over the years. Coast then claimed it became a zero discharger. Beginning in 1994, Coast submitted certification at least once a year, as required by the City, that it was not discharging any wastewater to the local sewer system. In 2002, the City revised the requirement for zero dischargers to submit certification to an increased frequency of twice a year. Coast submitted semiannual certification statements claiming zero discharge. In 2008, EPA required the City of San Jose to issue permits to zero-discharging industrial users. Accordingly, the City required Coast to submit a permit application, Coast submitted it in March 2008, and the City issued a zero-discharge permit to Coast on April 8, 2008. In approximately August 2009, the City discovered that Coast had been discharging through an illegal discharge point. Therefore, the City required that Coast submit a permit application, Coast submitted it in September 2009, and the City issued a wastewater discharge permit to Coast on May 24, 2010. This is the current permit.

3.0 Summary of Findings

1. This facility is subject to the federal categorical standard for metal finishing, 40 CFR 433, because of chemical etching it performs on site.
2. This facility is an SIU and a CIU. The facility is subject to applicable pretreatment requirements in 40 CFR 403.
3. Over the past few years, the facility has had some problems with consistent compliance with the local cyanide limit, the federal TTO limit,² and federal and local zinc limits.
4. Coast has not been able to provide a reason for its inability to comply consistently with federal and local pretreatment limits.
5. Coast is currently under a compliance agreement with the City of San Jose which includes such requirements as submitting procedures for treatment system operation and monitoring; performing monthly sampling and analysis for TTO, cyanide, and the metals regulated under 40 CFR 433 for three months; and submittal of a solvent management plan and a slug discharge prevention plan.

² EPA has since learned from the City that Coast used an incorrect test method to analyze for TTO. Therefore, the test results are invalid, and Coast did not comply with the monitoring requirements of 40 CFR 403.12.

Attachment 1: Photos



Photo 1

Magnesium photoengraving plate
Taken by Anna Yen on August 19, 2011



Photo 2

Tray used for developing the magnesium plate
Taken by Anna Yen on August 19, 2011



Photo 3

Etching machine

Taken by Anna Yen on August 19, 2011



Photo 4

Inside of etching machine

Taken by Anna Yen on August 19, 2011



Photo 5

Stainless steel holding bin for spent etching bath

Taken by Anna Yen on August 19, 2011



Photo 6

Onsite wastewater treatment system
(Blue tank in back is the holding tank. Tank in front is the treatment tank.)

Taken by Anna Yen on August 19, 2011



Photo 7

Long sink – for washing screens
Taken by Anna Yen on August 19, 2011



Photo 8

Drain pipe beneath sink –
discharging to collection bin
Taken by Anna Yen on August 19, 2011



Photo 9

Collection bin for sink drainage –
immediately upstream of wastewater
treatment system
Taken by Anna Yen on August 19, 2011



Photo 10

Film processor (on left side) –
chemicals fed into machine and hazardous waste discharge
Taken by Anna Yen on August 19, 2011



Photo 11

Discharge pipe from wastewater treatment system to sample box
Taken by Anna Yen on August 19, 2011



Photo 12

Sample box
Taken by Anna Yen on August 19, 2011

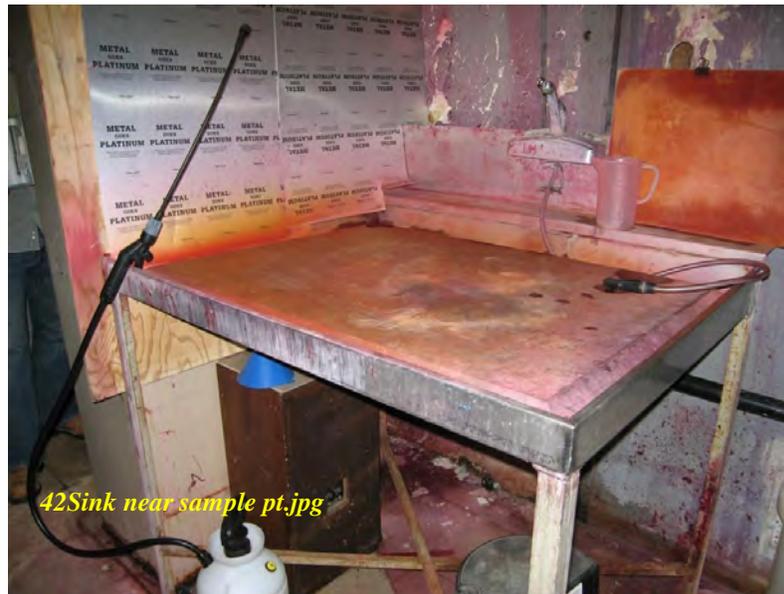


Photo 13

Sink – (sample box is on the other side of the left wall)
Taken by Anna Yen on August 19, 2011



Photo 14

Sink discharge pipe
– leads to wastewater treatment system
Taken by Anna Yen on August 19, 2011



Photo 15

Large holding tank of wastewater
treatment system

Taken by Anna Yen on August 19, 2011



Photo 16

Discharge pipe from large holding tank
– leads to sample box on other side of
wall

Taken by Anna Yen on August 19, 2011

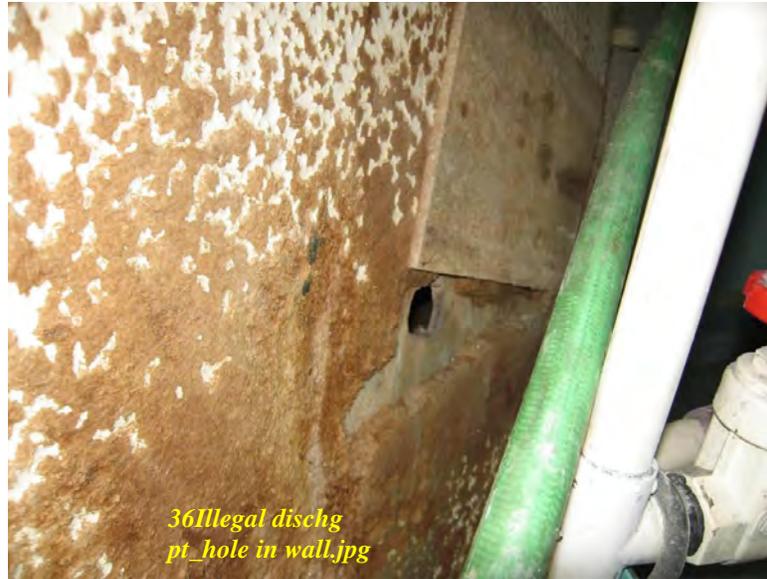


Photo 17

Illegal discharge point discovered in 2009
– (wood plank was moved to reveal the hole for this photo)
Taken by Anna Yen on August 19, 2011



Photo 18

Illegal discharge point discovered in 2009
– hole in wall is hidden by plate leaning against wall
Taken by Anna Yen on August 19, 2011

Attachment 2: Compliance Monitoring Records Review

Federal Categorical Limits in mg/L (40 CFR 433.17):	TTO	Zinc
Daily	2.13	2.61
Monthly		1.48
Measured Levels (mg/L)		
Sample Date	TTO	Zinc
7/6/2011 (City)	ND	8.68
7/6/2011 (Coast)		1.3
4/7/2011		1.2
1/20/2011		6.5
12/6/2010	0.333	
11/19/2010		0.21
11/18/2010		0.047
11/17/2010	0.0055	
11/10/2010	0.154	0.3
10/20/2010		0.13
10/11/2010	4.12*	
10/5/2010	2.448*	
9/29/2010	0.558	
10/28/2009		ND

* EPA has since learned from the City that Coast used an incorrect test method to analyze for TTO. Therefore, the test results are invalid, and Coast did not comply with the monitoring requirements of 40 CFR 403.12.

Key:

xxx Out of compliance with federal daily and/or monthly limit of 40 CFR 433.17