



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

May 5, 2010

In Reply Refer To: WTR-7

Mr. Brian Ward
Environmental and Safety Manager
AAA Plating & Inspection, Inc.
424 Dixon Street
Compton, CA 90222

Re: March 30, 2010 Clean Water Act Inspection

Dear Mr. Ward:

Enclosed is the May 5, 2010 report for our inspection of AAA Plating & Inspection, Inc. at the above address in Compton, CA.

The main findings are summarized below:

1. AAA did not provide notification to the Control Authority for significant changes and planned changes to process lines and operations.
2. The facility should be reclassified to be subject to 40 CFR 433.17 (metal finishing) because of past process changes made after August 31, 1982. As a new source under Part 433, AAA must comply with the requirements and pollutant limits listed in 40 CFR 433.17.
3. AAA has had problems achieving consistent compliance with federal categorical electroplating limits as well as local limits over the years. AAA must improve operation of its pretreatment system.

By May 28, 2010, please submit to EPA a short response letter to the Summary of Requirements and Recommendations in Section 7.0 of this report. Your letter should include an individual response to each of the numbered findings in Section 7.0. 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 Sanitation Districts of Los Angeles Counties (CSD), the Office of Enforcement at the State Water Resources Control Board, and the Los Angeles 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):

Rob Wienke, Sanitation Districts of Los Angeles County
Fred Cannizzaro, Sanitation Districts of Los Angeles County
Leo Sarmiento, California Environmental Protection Agency, Office of Enforcement,
Sacramento
Rebecca Christmann, Regional Water Quality Control Board, Los Angeles Region
Byron Ross, Monitoring and Management Services, LLC (EPA Contractor)

Categorical Industrial User Site Inspection Report

Categorical Industrial User: AAA Plating & Inspection, Inc.
424 Dixon Street
Compton, CA 90222

Contact: Brian Ward, Environmental and Safety Manager
Phone: 310-637-1066
Fax: 310-637-8253
Email: AAA@PACBELL.NET

Current Classification: Title 40 of the *Code of Federal Regulations* Part 413
(Electroplating: < 10,000 gallons per day)

Permit Number: 001124

Control Authority: Sanitation Districts of Los Angeles County
Industrial Waste Section
1955 Workman Mill Road
Whittier, CA 90601

Local Agency: City of Compton, CA
205 W. Willowbrook Avenue
Compton, CA 90220

Inspection Date: March 30, 2010

Inspected By: Fred B. Cannizzaro, Supervising Industrial Waste Inspector,
Sanitation Districts of Los Angeles County

Leo Sarmiento, P.E., Water Resources Control Engineer,
California Environmental Protection Agency, State Water
Resources Control Board, Office of Enforcement, Sacramento, CA

Byron Ross, Monitoring and Management Services, LLC,
EPA Contractor, Subcontractor for Tetra Tech, Inc.

*Report prepared by Byron Ross on April 8, 2010, reviewed and finalized by EPA
Region 9 on May 5, 2010.*

Contents

| | |
|--|----------|
| 1. Executive Summary | 1 |
| 2. Facility Description | 1 |
| 3. Inadequate Notification to the Control Authority | 3 |
| 4. Categorical Classification..... | 4 |
| 5. Wastewater Treatment Procedures and Practices..... | 5 |
| 6. Past Violations and Enforcement | 6 |
| 7. Summary of Requirements and Recommendations | 8 |

1. Executive Summary

An industrial user site visit (inspection) was conducted at AAA Plating & Inspection, Inc. (AAA) on March 30, 2010, at the request of the U.S. Environmental Protection Agency (EPA) Region 9. AAA is classified as an electroplating facility subject to Title 40 of the *Code of Federal Regulations* (CFR) Part 413 for facilities discharging less than 10,000 gallons per day (gpd). The City of Compton is the local agency, and the Sanitation Districts of Los Angeles County (Districts or CSD) is the control authority that issues the control mechanism, conducts the inspections, and performs compliance sampling and enforcement. The inspection consisted of three parts: an interview of Brian Ward (AAA's contact person), a walk-through inspection of the facility, and a closing interview to discuss inspection observations, concerns, recommendations, and requirements. The inspection team included Fred B. Cannizzaro, Supervising Industrial Waste Inspector for CSD; Leo Sarmiento, State Water Resources Control Board, Office of Enforcement; and Byron Ross, Monitoring and Management Services, EPA contractor. The inspection team identified the following items that need to be addressed:

1. AAA did not provide notification to the Control Authority for significant changes and planned changes to process lines and operations.
2. The facility should be reclassified to be subject to 40 CFR 433.17 (metal finishing) because of past process changes made after August 31, 1982. As a new source under Part 433, AAA must comply with the requirements and pollutant limits listed in 40 CFR 433.17.
3. AAA has had problems achieving consistent compliance with federal categorical electroplating limits and local limits over the years. AAA must improve operation of its pretreatment system. Recommendations by the inspection team include comprehensive staff training, development and implementation of standard operating procedures and practices, and establishment of quality control checks.

This report summarizes the overall findings of the AAA inspection and describes the findings that are not consistent with federal pretreatment program requirements. In addition, the report provides recommendations to enhance the effectiveness of the pretreatment program implementation and enforcement.

2. Facility Description

AAA cleans, plates, anodizes, paints, and tests various parts for the aerospace industry. AAA has 90 employees and more than 50,000 square feet of work area in different buildings. Specific processes include ion vapor deposition (IVD) of aluminum, cadmium plating, vacuum cadmium coating, chromic acid anodizing, sulfuric acid anodizing, chem film, alodine, aqueous degreasing, abrasive cleaning, salt spray testing, and fluorescent penetrant testing. Painting includes use of chromate, epoxy and etch primers, as well as enamels. The EPA contractor obtained a copy of the AAA floor plans, process line schematic, and chemical tank description that was on file with the Districts. During the inspection, the Districts' inspector requested an updated copy of the AAA process line schematic and floor plans that would include recent changes in the anodizing and

cadmium plating tank locations and the proposed new phosphoric acid (hard) anodizing process line.

AAA has seven IVD units that include four large units and three barrel chamber units. The barrel chamber units are used for smaller parts. During the inspection the estimated installation dates for the IVD units were in the approximate time frame of 1987 to 1990. After the inspection, Brian Ward, AAA representative, provided an email to the EPA contractor stating that AAA leased the rights to the process from McDonnell Douglas in February 1980. However, subsequent IVD units have been installed, including one unit in 1995 and another in 2008. Preparing the parts for the IVD units consists of dipping in the aqueous degreaser tank, followed by degreaser rinse. Also, the IVD baskets and shields are cleaned approximately once a month in the aqueous degreaser tanks and degreaser rinse. The degreaser rinse tank is dumped to the wastewater treatment area approximately on weekly basis, and new rinse water is added to the tank.



IVD aqueous degreaser tank and rinse tank



Two large IVD units

The average daily discharge of process wastewater is approximately 4,500 gpd. Approximately 500 gpd are generated from the fluorescent penetrant testing booth, which is used for quality control testing of parts. The fluorescent penetrant testing wastewater does not go through the wastewater treatment system but is discharged to the tank just before the 30 degree V-notch weir after the treatment units. The remaining process wastewater flow that is discharged to the AAA wastewater treatment facility is rinse tank waters, with a small volume of wastewater generated at the salt spray test units. The discharger generates approximately 3,000 gpd of reverse osmosis (RO) water and 1,000 gpd of reject RO water. The reject RO water is normally generated from 7:00 AM to noon each day at a flow rate of approximately 3 gallons per minute. The reject RO water has a total dissolved solids concentration of approximately 1,500 mg/L, and is used on a daily basis to replace the water in the tap water dragout tank that follows the aluminum etch tank. The AAA contact person said that if that water was not replaced daily with the reject RO water, it would have to be replaced by tap water.

The AAA wastewater treatment area description, practices, and flow measurement are discussed in Section 5 of this report.

3. Inadequate Notification to the Control Authority

The Districts issued to AAA an industrial wastewater discharge permit (Permit Number 001124) with an approval date of August 26, 2008, and expiration date of August 25, 2013. The permit requires (Industrial Wastewater Discharge Permit Requirement List, #34 and #35) AAA to submit plans and supporting documents to the local agency for initial review and obtain approval from the Districts before operating the new process line. Also, the permit requires that AAA submit engineering drawings for changes in equipment or processes to the Districts through the local agency for approval before implementation.

AAA failed to notify the Districts of its previous and planned process changes. The AAA contact person stated that a new phosphoric acid (hard) anodize line is scheduled to be installed in approximately one month. Also, approximately one year ago, AAA moved the cadmium plating line to a new area that was previously office space and storage, and new tanks were installed for the cadmium plating line. In addition, approximately one year ago the chromic acid and sulfuric acid anodize line had new tanks installed, and was moved to the opposite side of the room to allow an area for the new phosphoric acid anodize line to be installed. AAA has not submitted plans to the Districts for approval of any of the process line changes. AAA is required to submit a baseline monitoring report once it becomes a new source subject to a federal categorical standard. Per 40 CFR 403.12(b), "At least 90 days prior to commencement of discharge, New Sources...shall be required to submit to the Control Authority a report which contains the information listed in paragraphs (b)(1)-(5) of this section." Paragraph (b)(3) requires a description of operations, including a schematic process diagram. Once AAA made a process change or installation that resulted in it becoming a new source subject to 40 CFR 433.17, AAA was required to submit the baseline monitoring report before it discharged from that particular line. Therefore, AAA was required by both the CSD-issued permit and the federal pretreatment standards at 40 CFR 403.12(b) to submit information on its process change before operating/discharging. In addition, if the process change would result in a "substantial change in the volume or character of pollutants in their discharge", then AAA is required, per 40 CFR 403.12(j), to notify the Districts in advance of this change in discharge. During the inspection, the inspection team informed the AAA contact person of the Districts' permit requirements and federal requirements at 40 CFR 403.12(j). The Districts' inspector requested that the facility complete a permit revision form and that it submit to the local agency and the Districts a letter requesting approval of the new process line installation. The Districts' inspector emphasized to facility representatives that the Districts must approve the new phosphoric acid anodize process line before the facility may operate it.



Area that previously had chromic acid and sulfuric acid anodize line. This area is where the new phosphoric acid anodize line will be located. The left portion of the picture shows new tanks for chromic acid and sulfuric acid anodize line location.



New tanks installed for chromic acid and sulfuric acid anodize line.

4. Categorical Classification

AAA is incorrectly classified as an electroplating facility subject to 40 CFR Part 413 that discharges less than 10,000 gpd. On the basis of the observations from this inspection, AAA should be reclassified as a categorical industrial user subject to the Pretreatment Standards for New Sources under 40 CFR 433.17 (metal finishing), at minimum, for the process lines associated with the following changes:

- Cadmium plating line relocation and tank replacement approximately one year ago
- Chromic acid and sulfuric acid anodize line relocation and tank replacement approximately one year ago
- IVD of aluminum with associated aqueous cleaning and rinse of parts was initiated in February 1980. New IVD units were installed after 1982, with the most recent unit installed in 1995, and another in 2008.
- Plans for new phosphoric acid (hard) anodizing line to be installed in approximately one month

Based on the definition in 40 CFR 403.3(m)(1), a “new source” is “any building, structure, facility, or installation from which there is or may be a discharge of pollutants” for which construction commenced after August 31, 1982 (the publication date of the proposed rule for 40 CFR Part 433). It must also meet one of three conditions listed in 40 CFR 403.3(m)(1). The past changes and proposed future installation at the facility meet one of the following conditions (referencing 40 CFR 403.3(m)(1)):

- (ii) The building, structure, facility, or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source, or
- (iii) The production or wastewater generating processes of the building, structure, facility or installation are substantially independent of an existing source at the same site.

In addition, the preamble to the Final Part 403 Rule at 53 FR 40601 (October 17, 1988) discusses situations in which new source standards apply, namely, “an existing source which undertakes major construction that legitimately provides it with the opportunity to install the best and most efficient production process and wastewater treatment technologies...”. Breaking down an existing line and relocating it creates a new source because the construction and reassembly of the existing production equipment to the new location provides an opportunity to design and install the best and most efficient production processes.

AAA should note that the metal finishing cyanide limit, per 40 CFR 433.12(c), applies to the cyanide waste stream after cyanide treatment and before dilution with other streams. Alternatively, samples may be taken at the final effluent, if the discharger’s limitations are adjusted based on the dilution ratio of the cyanide waste stream flow to the effluent flow. Also, based on AAA’s self-monitoring and the Districts’ monitoring records over the past two years, it appears AAA will not be able to meet the cadmium limits (Daily Maximum Limit: 0.11 mg/L; Monthly Average Limit: 0.07 mg/L) under Part 433. AAA must comply with all the limits specified in 40 CFR 433.17.

5. Wastewater Treatment Procedures and Practices

AAA’s wastewater treatment system consisted of two levels. The lower level includes two 2,500-gallon general sump tanks, two 2,500-gallon storage tanks, one 2,500-gallon sulfuric acid dump tank, and one 1,000-gallon chromate rinse storage tank. The upper level includes the wastewater treatment chemical and treatment tanks: sulfuric acid tank,

sodium hydroxide tank, sodium metabisulfite tank, bleach tank, cyanide oxidation tank, an anionic polymer blending tank, sludge thickener tank, and a clarifier. Wastewater is treated in batches, depending on the type of wastewater to be treated. AAA has a pH adjustment system, flow measurement device, and a sample box just outside the building. Flow is measured using a 30 degree V-notch weir as the primary device and an Isco 4230 Bubbler Flow Meter as the secondary device.

AAA's industrial wastewater discharge permit requirements include continuous pH recording instrument with chart and calibration records, preparation and maintenance of an up-to-date *Operation and Maintenance Manual* of the pretreatment system, and flow monitoring system maintenance records. During the inspection of the wastewater treatment system, the inspection team requested an explanation for the previous total chromium and cyanide amenable to chlorination violations that occurred on July 30, 2009, and January 15, 2009, respectively. Brian Ward, AAA contact person, stated that the total chromium violation was due to an electrical corrosion issue for the sodium metabisulfite feed system. The quality control for treatment of the chromium includes use of an oxidation-reduction potential meter with control readings established at 200 to 250 millivolts. The cyanide amenable to chlorination violation was caused by an employee not being aware of the type of wastewater being treated who then treated it for hexavalent chromium rather than for cyanide destruction.

On the basis of the wastewater treatment system review and to prevent any future total chromium and cyanide amenable to chlorination violations, the inspection team strongly recommends that AAA revise its pretreatment system *Operation and Maintenance Manual* to include a training program and procedures, especially for hexavalent chromium and cyanide treatment so that all pretreatment system operators can use it. In addition, the inspectors recommend that AAA establish quality control checks using manual meters or other devices to ensure proper treatment of the wastewater before discharge, and ensure that a backup person for Brian Ward is knowledgeable of all pretreatment system operation details. Furthermore, the Districts' inspector informed the AAA representative that any rinse water or dragout water that is pumped from the berm areas to the wastewater treatment system must be documented. Documentation should include, at a minimum, the volume pumped or cleaned, and the date. In addition, the Districts' inspector requested that any flow meter maintenance or calibration should be included in the flow-monitoring system log book.

6. Past Violations and Enforcement

Based on previous conversations EPA Region 9 had with the Districts, AAA for many years has not been able to achieve consistent compliance with its permit limits for cyanide and chromium. In addition, AAA was in significant noncompliance in 2008 due to a violation of the federal categorical electroplating limit for cadmium.

As a follow-up to this inspection, the Districts forwarded AAA's self-monitoring and the Districts compliance monitoring results for AAA (for the period of 2008–2009) to the EPA contractor for review. Federal categorical daily maximum limits were exceeded one time during that period for cadmium and cyanide amenable to chlorination, and the total chromium local limit was exceeded one time during the period. Also, the 4-day average

limit for cadmium was exceeded during the period of February 2008 through January 2009. No other pollutant violations were identified.

The EPA contractor could not determine whether sample holding times were exceeded because none of the monitoring reports (both AAA self-monitoring and Districts' compliance monitoring reports) submitted by the Districts included analysis dates. Following the inspection, the Districts' inspector forwarded information to the EPA contractor that explained that all holding times, as per 40 CFR Part 136, were met.

Also, the EPA contractor could not determine the time frame in which AAA or the Districts became aware of violations. The only date on the August 14–15, 2008, self-monitoring report (cadmium violation) was the certification date by the AAA representative of January 8, 2008 (which appears to be typographical error and should be January 8, 2009). The next cadmium sample was performed on January 15, 2009, which was 5 months after the initial cadmium violation. The re-sample date for the total chromium violation collected on July 29–30, 2009, was on October 20, 2009. The inspection team recommends that the facility clearly document the dates on which it first becomes aware of its self monitoring violations (e.g., possibly notification by the Districts of the violation) to ensure re-sampling within 30 days of becoming aware of the violation. Following the inspection, the Districts' inspector provided information on the time frame that CSD becomes aware of violations and analysis results. The CSD Industrial Waste Division becomes aware of violations approximately 2 to 4 weeks after laboratory approval, or "completed date", by running their "Exceedance" program which flags all violations during a specified time period.

Furthermore, from the data provided by the Districts, the 4-day average for cadmium had been exceeded. The four composite samples from February 2008 through January 2009 had an average cadmium concentration of 0.816 mg/L. The federal 4-day average limit for cadmium is 0.7 mg/L. Following the inspection, the Districts' inspector provided the EPA contractor information that a "4-day violation letter" from CSD was mailed to AAA on September 4, 2009 for the 4-day average cadmium violation. The Districts runs a computer program once per year to determine 4-day average violations. Also, on February 16, 2009 a self-monitoring report deficiency letter was mailed by the Districts to AAA for the daily maximum cadmium violation. AAA did not submit a response to the Districts until May 12, 2009.

| | Cadmium (mg/L) | T. Chromium (mg/L) | Cyanide, A (mg/L) |
|---|---------------------------|-------------------------------------|------------------------------|
| Daily Max/4 day Avg. limit: | 1.2/0.7 | 10 (Local limit: grab or composite) | 5.0/2.7 |
| Sample date (type) | | | |
| 8/14-15/08 (composite, self-monitoring) | 1.9 | 1.1 | < 0.05 (grab) |
| 1/15-16/09 (composite) | 0.977 | 6.79 | 5.8 (grab) |
| 3/26/09 (grab) | NA | NA | < 0.05 |
| 5/27/09 (grab) | NA | NA | < 0.05 |
| 7/29-30/09 (composite) | < 0.02 | 40.5 | < 0.05 (grab) |
| 10/20/09 (grab) | 1.03 | 0.94 | NA |
| 12/14-15/09 (composite, self- | 0.1 | 5.0 | < 0.005 (grab) |

| | | | |
|------------------------|-------|------|----|
| monitoring) | | | |
| 1/21-22/10 (composite) | 0.752 | 1.69 | NA |

7. Summary of Requirements and Recommendations

Listed below are the primary requirements and recommendations resulting from the inspection of AAA. For more specific information pertaining to each comment, see the cited sections of the report.

1. AAA has not submitted plans to the Districts for approval of the new phosphoric acid anodize process line installation and operation, which is scheduled for installation in one month. Also, AAA failed to notify the Districts of previous changes to cadmium plating line or the chromic acid and sulfuric acid anodizing line. AAA's discharge permit (Permit Number 001124) and 40 CFR 403.12(j) requires it to submit plans and get approval from the local agency and the Districts before operating new process lines. (Section 3, Inadequate Notification to the Control Authority)
2. On the basis of the observations from this inspection, AAA should be reclassified to be subject to 40 CFR 433.17 (metal finishing). As a new source under Part 433, AAA must comply with the requirements and pollutant limits listed in 40 CFR 433.17. (Section 4, Categorical Classification)
3. AAA has had problems achieving consistent compliance with federal categorical electroplating limits and local limits over the years. AAA must improve operation of its pretreatment system. The inspection team strongly recommends that AAA revise its pretreatment system *Operation and Maintenance Manual* to include a training program and procedures for all pretreatment system operators, establish quality control checks using manual meters or other devices to ensure proper treatment of the wastewater, and ensure that a backup person for Brian Ward is knowledgeable of all pretreatment system operation details. (Section 5, Wastewater Treatment Procedures and Practices)
4. The Districts' inspector requested that any flow-meter maintenance or calibration be included in the flow-monitoring system log book. (Section 5, Wastewater Treatment Procedures and Practices)
5. The Districts' inspector informed the AAA representative that any rinse water or dragout water that is pumped from the berm areas to the wastewater treatment system must be documented and recorded. (Section 5, Wastewater Treatment Procedures and Practices)
6. The inspection team recommends that all laboratory reports include the analysis dates to determine if the holding time has been met, and the dates that AAA first becomes aware of violations (e.g., the date that AAA is notified of self-monitoring violations, if that is the case) are clearly documented to ensure that re-sampling occurs within 30 days of becoming aware of the violation. (Section 6, Past Violations and Enforcement)