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

Mar 29, 2011

In Reply Refer To: WTR-7

Mr. Joseph Trimino
President
Sav-On Plating, Inc.
15523 Illinois Ave.
Paramount, CA 90723

Re: August 25, 2010 Clean Water Act Inspection

Dear Mr. Trimino:

Enclosed is the March 23, 2011 report for our inspection of Sav-On Plating at the above address in Paramount, CA.

The main findings are summarized below:

1. This facility is subject to the federal categorical standard for electroplating, 40 CFR 413, as a facility discharging greater than 10,000 gpd. The facility's electroplating and chemical coating operations trigger applicability of this categorical standard.
2. The facility had some violations of the federal total cyanide and zinc limits over the past few years. The facility has an onsite wastewater treatment system equivalent to best available technology economically achievable (BAT) for 40 CFR 433. Since the facility is subject to the less stringent limits of 40 CFR 413, it should not have difficulty consistently complying with its permit limits.
3. EPA recognizes Sav-On's current water-efficient practices. The facility should look into options to replace its continually flowing rinses. Such a change would lead to reduced water input, less water to treat, and potential long-term cost savings.

By April 29, 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 Sanitation Districts of Los Angeles Counties and the Los Angeles Regional Water Quality Control Board.

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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
Brandi Outwin-Beals, Regional Water Quality Control Board, Los Angeles Region

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

Industrial User Inspection Report

Industrial User:	Sav-On Plating, Inc.
Industrial User Address:	15523 Illinois Ave., Paramount, CA 90723
Inspection Date:	August 25, 2010
EPA Region 9 Inspector:	Anna Yen, Environmental Engineer Water Division, CWA Compliance Office
Sanitation Districts of Los Angeles County Inspectors:	Fred Cannizzaro, Supervising Industrial Waste Inspector Steve Sealy, Industrial Waste Inspector
Facility Contact During Inspection:	Joseph Trimino, President Rommel Medina, Office Manager
Report Date:	March 23, 2011

Report prepared by Anna Yen

1.0 Scope and Purpose

The purpose of the industrial user inspection on August 25, 2010 was to determine the pretreatment standards and requirements that apply to this facility and to ensure compliance with those standards and requirements. This inspection is part of a regionwide EPA effort, stemming from an environmental justice initiative, to focus inspections along the I-710 corridor in the Los Angeles area.

This facility is an industrial user which discharges to the local publicly owned treatment works (POTW), the Joint Water Pollution Control Plant (JWPCP).

1.1 General and Process Description

Operations began at this plating facility in 1973. The current owner bought it in 2003. Sav-On Plating, Inc. ("Sav-On") performs barrel plating of mostly small parts such as screws and fasteners. Electroplating operations include zinc, nickel, brass, copper, and

tin plating. Sav-On also performs conversion coating to provide coloring of metal parts.

Sav-On has two buildings. In one (referred hereinafter as the "Zn/Ni building"), it performs zinc and nickel plating. In the other building which is across an alley (referred hereinafter as the "brass/Cu building"), it performs brass, copper, tin, and sometimes bronze plating.

In each building, containment is provided below the floor grating under the process lines. For each process line, Sav-On has the tanks located side by side so that when parts are moved from one tank to another, dragout to the containment below the floor grating is minimized or avoided. Parts are placed in spinning cages (i.e., "barrels") and moved from tank to tank. *See Photos 1-3 in Attachment 1.* At the end of each process line, parts are placed in a drying machine to spin dry.

Rinses

All rinse tanks in the Zn/Ni building have continuous flowing rinses, with final rinses at the end of each process line taking place as static rinses in plastic bins. Rinse tanks in the brass/Cu building have continuous flowing rinses; however, where there are two rinse tanks in a row, Sav-On uses countercurrent rinsing.

In the Zn/Ni building, all rinse waters from rinse tanks and any spillage goes from the containment below the floor grating to the onsite wastewater treatment system.

In the brass/Cu building, rinses with cyanide are conveyed to the onsite cyanide treatment system. *See Photo 4 in Attachment 1.* All other rinses, which collect in the containment under the floor grating, are conveyed through a separate pipe to a concrete pit which also collects the treated cyanide wastewaters. The contents of the concrete pit are pumped to the onsite wastewater treatment system. *See Photo 5 in Attachment 1.*

Other Operations in the Zn/Ni Building

The Zn/Ni building also houses a conversion coating line to color metal parts blue or yellow and a burnishing department where parts are burnished in a tumbler or in a vibratory machine. Both the tumbler and the vibratory machine contain media and require soap solution to be added. After parts are burnished, they are rinsed in rinse tanks, followed by spin drying. The rinse tanks use continuous flow rinses. The vibratory machine also has a separate compartment to the side which contains and heats corn cob particles. Parts are placed in this compartment to dry. Sav-On also performs lacquer coating in this area of the building. Parts are placed in a basket and dipped into the container of lacquer.

The vibratory machine has a compartment underneath to catch the used soap solution. This wastewater as well as the used soap solution from the tumbler, rinse water from the rinse tanks, and other spillage in the burnishing department are all collected in a trench drain that surrounds the burnishing department. *See Photos 6-8 in Attachment 1.* These wastewaters flow to a grated sump outside. The contents of the sump are then pumped to

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the onsite wastewater treatment system. *See Photos 9 and 10 in Attachment 1.*

Other Operations in the Brass/Cu Building
The brass/Cu building also houses a chromating line for processing metal parts requiring special coloring. The process line is simply a line of drums.

Cleaning of Tanks
Plating solutions are never replaced. Chromating solutions are replaced every 2-3 months. The spent solutions and the rinses are sent to the onsite wastewater treatment system. Soak cleaners and acids are replaced twice a year. The used cleaners and acids are batch treated in the onsite wastewater treatment system.

CN Destruct System
The cyanide rinses are sent to a tank where the pH is adjusted to a setpoint of 11.5. Sodium hypochlorite is then added for a detention time of more than 24 hours. *See Photo 4 in Attachment 1.* The treated wastewater is discharged to a concrete pit where non-cyanide rinses from the brass/Cu building are conveyed. The contents of this pit are then pumped to the onsite wastewater treatment system. *See Photo 5 in Attachment 1.*

Onsite Wastewater Treatment System
See Section 1.3

1.2 Facility Wastewater Sources and Other Wastes

Sav-On generates the following wastewaters:

- Rinses and any dragout from plating and chemical coating operations of both buildings
- Used burnishing soap solution, rinses, and spillage from burnishing department
- Spent chromating solutions, soak cleaners, and acids

The wastewaters from the containment underneath the process lines of the Zn/Ni building are conveyed through one pipe to the onsite wastewater treatment system. Wastewater from the trench drain of the burnishing department of the Zn/Ni building flows to a grated sump outside. The contents of the sump are then pumped to the onsite wastewater treatment system. The contents of the concrete pit, which contains the treated cyanide rinses and all other rinses from the brass/Cu building, are pumped to the onsite wastewater treatment system. *See Photos 9 and 10 in Attachment 1.*

Once treated, the wastewater that has been processed through the onsite wastewater treatment system is conveyed to the local sewer system.

Sav-On implements some water-efficient practices, such as use of dragout tanks in certain parts of the process lines, counter-current rinses on some rinse tanks, and placing tanks of one process line directly next to each other to minimize dragout to the containment below. Sav-On could make some additional improvements. The facility uses continually

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flowing rinses on many of its rinse tanks, resulting in excess water to the facility's wastewater treatment system. Sav-On should consider alternative rinse systems to enable the facility to use water more efficiently. For example, on-demand rinse systems would enable Sav-On to keep a flowing rinse system rather than a static rinse if Sav-On requires it for product quality, yet the facility would still use less water than it does currently, resulting in potential cost savings for Sav-On. This is only one example of many options Sav-On has that would lead to cumulative reductions in water input, reductions in the amount of wastewater processed through its treatment system and, therefore, potential long-term cost savings.

1.3 Facility Process Wastewater Treatment System

The facility's wastewater treatment system consists of pH adjustment, coagulation/flocculation, clarification, and solids removal. The first part of the wastewater treatment system is the reactor where pH adjustment occurs. *See Photo 10 in Attachment 1.* In the first section of the reactor, the pH is controlled automatically to neutralize the wastewater to a pH of 7. Ferric chloride is then added for coagulation. In the next section of the reactor, the pH is adjusted again with the setpoint at 9.5. The wastewater is then pumped to a Lamella clarifier where polymer is added. *See Photo 11 in Attachment 1.* The mostly solids portion of the wastewater which settles to the bottom of the clarifier is sent to a sludge thickening tank. The thickened sludge is then sent to a filter press for final dewatering, and the dewatered solids are hauled away for offsite disposal. *See Photo 12 in Attachment 1.* Both the overflow from the sludge thickening tank and the filtrate from the filter press are sent back to the high pH section of the reactor.

The overflow from the Lamella clarifier is sent to one of two holding tanks. *See Photo 13 in Attachment 1.* Sav-On takes a sample and analyzes it. Only if Sav-On finds that the sample meets permit limits does Sav-On discharge the contents to an underground three-stage clarifier. Otherwise, the wastewater is sent back through the wastewater treatment system. The permitted sample point, as well as a pH meter, is located immediately downstream of the clarifier. The treated wastewater from the clarifier flows to the local sewer system. *See Photo 14 in Attachment 1.*

Any soak cleaners and acids that are spent and need to be replaced from a plating process are treated separately in a batch operation. First, these cleaners and acids are sent to a batch treatment tank labeled “Chemical Storage Area I.” *See Photo 15 in Attachment 1.* The pH is adjusted, and ferric chloride is added. Then the wastewater is sent to the filter press of the onsite wastewater treatment system. And the filtrate is sent back to the head of the wastewater treatment system.

1.4 Wastewater Discharge

Wastewater from this facility discharges to the Joint Water Pollution Control Plant. The

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Sanitation Districts of Los Angeles County ("LACSD") owns and operates the wastewater treatment plant, which is subject to requirements under an NPDES permit (No. CA0053813) issued by the Regional Water Quality Control Board.

2.0 Compliance with Federal Categorical Standards

By LACSD's pretreatment permit, this facility is subject to the federal categorical standard for electroplating, 40 CFR 413, for facilities that discharge greater than 10,000 gallons per day (gpd). Therefore, it is a categorical industrial user (CIU). Sav-On's electroplating and chemical coating operations trigger applicability of this categorical standard.

Based on a review of monitoring records of October 2007 through May 2010, EPA found that Sav-On had some violations of the federal limits for total cyanide and zinc in 2008 and 2009 and most recently for zinc in 2010. Based on surveillance monitoring that LACSD conducted in March 2009, LACSD found additional violations of federal limits for copper, zinc, and total metals. *See table in Attachment 2.*

For the cyanide violations, Sav-On explained, during the inspection, that a line from the nickel plating process had been plumbed incorrectly and had sent non-cyanide wastewater to the cyanide treatment system. This action caused the formation of complex compounds which could not be treated by the treatment system. In addition, LACSD held a compliance meeting with Sav-On on August 20, 2009. In the "Outcome of Compliance Meeting" report written by LACSD, LACSD states:

> The company presented several corrective actions already undertaken including plumbing the copper and nickel rinse pipelines containing iron directly to a non-cyanide rinse pit, thus preventing formation of complex ferro and ferricyanides with the cyanide bearing waste. In addition, the company made some changes in its personnel to improve the operation of the pretreatment system.

Among other requirements, LACSD required that Sav-On collect five consecutive days of grab samples for total cyanide analysis. Sav-On fulfilled this requirement, though not on consecutive days, and demonstrated compliance with the federal limit for total cyanide. For the time period reviewed by EPA, Sav-On has remained in compliance with the total cyanide limit.

However, it is not clear what measures Sav-On has made to resolve compliance issues with the zinc federal limit. The most recent violations during the time period of review occurred in April and May of 2010.

The facility's wastewater treatment system is equivalent to the best available technology economically achievable (BAT) identified for 40 CFR 433. Since Sav-On is subject to the less stringent limits of 40 CFR 413, it should be able to achieve consistent compliance

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with the federal limits assuming that the facility's wastewater treatment system is operated and maintained correctly.

2.1 Compliance with Other Federal Pretreatment Requirements

This facility is 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

The facility's most recent pretreatment permit issued by LACSD is Permit No. 5276R-2. The facility's sample point, as indicated in its permit, is the sample box immediately downstream of the 3-stage clarifier. *See Photo 14 in Attachment 1.* The facility's permit requires Sav-On to sample once every three months.

In September 2008, Sav-On violated the local limit for total cyanide. LACSD held a compliance meeting with Sav-On in August of 2009. See Section 2.0 for more details.

3.0 Summary of Findings

1. This facility is subject to the federal categorical standard for electroplating, 40 CFR 413, as a facility discharging greater than 10,000 gpd. The electroplating and chemical coating processes performed at this facility trigger applicability of this categorical standard
2. This facility is an SIU and a CIU. The facility is subject to applicable pretreatment requirements in 40 CFR 403.
3. Over the time period reviewed, EPA found that Sav-On had some violations of the federal limits for total cyanide and zinc over the past few years. The facility has taken corrective actions to resolve cyanide violations, but compliance with the zinc limit seems to be a continuing issue.
4. The facility has an onsite wastewater treatment system equivalent to BAT for 40 CFR 433. Since the facility is subject to the less stringent limits of 40 CFR 413, it should not have difficulty consistently complying with its permit limits.
5. EPA recognizes that Sav-On implements some water-efficient practices. The facility should look into options to replace its continually flowing rinses. Improvements such as this would lead to reduced water input, less water to treat, and potential long-term cost savings.

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Attachment 1: Photos

Photo 1

Nickel Plating Line
Taken by Anna Yen on August 25, 2010

Photo 2

Barrel Plating of Nickel Plating Line
Taken by Anna Yen on August 25, 2010

Photo 3

Brass and Copper Plating Line
Taken by Anna Yen on August 25, 2010

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Photo 4

Cyanide Treatment System
Taken by Anna Yen on August 25, 2010

Photo 5

Concrete Pit of Non-Cyanide-Bearing Wastewaters
Taken by Anna Yen on August 25, 2010

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Photo 6

Taken by Anna Yen on August 25, 2010

Photo 7

Taken by Anna Yen on August 25, 2010

Photos 6 & 7: Trench Drain Surrounding Burnishing Department

Photo 8

Burnishing Department in Zn/Ni Building
Taken by Anna Yen on August 25, 2010

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Photo 9

Sump of Wastewaters to be Pumped to Wastewater Treatment System
Taken by Anna Yen on August 25, 2010

Photo 10

Pump from Sump to Reactor of Wastewater Treatment System
Taken by Anna Yen on August 25, 2010

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Photo 11

Lamella Clarifier of Wastewater Treatment System
Taken by Anna Yen on August 25, 2010

Photo 12

Filter Press
Taken by Anna Yen on August 25, 2010

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Photo 13

Holding Tanks
Taken by Anna Yen on August 25, 2010

Photo 14

Underground 3-Stage Clarifier and Sample Box
Taken by Anna Yen on August 25, 2010

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Photo 15

Batch Treatment Tank
Taken by Anna Yen on August 25, 2010

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Attachment 2: Compliance Monitoring Records Review

Permit Limits in mg/L (Federal Categorical Limits):	**Cyanide (Total)**	**Zinc**
Daily	1.9	4.2
4-Day	1.0	2.6

	Measured Levels (mg/L)	
Sample Date (1st day ofcomposite sample)	**Cyanide (Total)**	**Zinc**
5/25/10	0.54	**3.4**
4/5/10		**3.3**
3/11/10	0.45	0.69
11/10/09	<0.005	1.1
11/4/09	0.45	
9/24/09	<0.005	1.7
9/22/09		0.37
9/14/09	<0.005	
9/10/09	<0.005	
9/9/09	<0.005	
9/8/09	<0.005	
9/3/09	<0.005	
8/25/09	<0.005	1.7
6/29/09	**7.0**	0.77
5/19/09	<0.005	0.93
4/29/09	**2.4**	1.96
1/27/09 (split – Sav-On)	<0.02	**4.16**
1/27/09 (split – LACSD)	**5.6**	**5.94**
12/9/08	<0.02	**4.13**
9/23/08	**18**	
7/15/08	0.69	1.29
4/14/08	0.53	1.30
3/11/08	<0.05	0.85
2/26/08	**1.1**	1.89
10/15/07	0.37	1.73

Key:

xxx Out of compliance with federal daily and/or monthly limit of 40 CFR 413.14(c)

☐ Out of compliance with 4-day limit

Note: The table above does not include surveillance monitoring that LACSD conducted in March 2009. Based on surveillance monitoring data, LACSD issued an NOV to Sav-On for violations on March 11, 2009 of the total metals, zinc, and total cyanide limits.

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