



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 30, 2008

In Reply Refer To: WTR-7

Magdalena Ponce, Owner
Beverly Hills Plating
243 North Robertson
Beverly Hills, California 90221

Re: October 9, 2007 Clean Water Act Inspection

Dear Ms. Ponce:

Enclosed is the January 30, 2008 report for our October 9, 2007 inspection of Beverly Hills Plating. Please submit a short response to the findings in Sections 2 through 5 of this report, to EPA, the Los Angeles County Department of Public Works, and the Regional Water Quality Control Board, by **March 28, 2008**.

The main findings are summarized below:

- 1 The Los Angeles County DPW permit applied the correct Federal standards. However, samples must be collected not only of the running rinses but also of the alkaline cleaner spents. Monitoring frequencies also need to be adjusted to be representative over time.
- 2 All samples in the 2005-2007 sample record met limits. However, sampling does not substantiate a finding that treatment is unnecessary because sampling is (1) compromised by dilution from excess rinsing and (2) not likely to account for alkaline cleaner spents.
- 3 Untreated continuous rinses from an intermittently used metal finishing line are considered dilution as a substitute for treatment, a practice prohibited by the Federal rules. Either cyanide treatment or on-demand rinsing must be installed.

I appreciate your helpfulness extended to me during this inspection. I remain available to the Los Angeles County Department of Public Works, and to you to assist in any way. Please do not hesitate to call me at (415) 972-3504 or e-mail at arthur.greg@epa.gov.

Sincerely,

Greg V. Arthur
CWA Compliance Office

Enclosure

cc: Frank Chin, Los Angeles County DPW
David Hung, RWQCB-Los Angeles



U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 9

CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION REPORT

Industrial User: Beverly Hills Plating
243 North Robertson, Beverly Hills, California 90221
40 CFR 413 - Existing Source Job-Shop Metal Finishing

Treatment Works: City of Los Angeles
Hyperion Wastewater Treatment Plant
NPDES Permit CA0109991 - California WDRs R4-2005-0020)

Pretreatment Program: Los Angeles County Department of Public Works

Date of Inspection: October 9, 2007

Inspection Participants:

US EPA: Greg V. Arthur, Region 9, CWA Compliance Office, (415) 972-3504

RWQCB-Los Angeles: None

LA County DPW: Frank Chin, Industrial Waste Unit, (626) 458-5173
Joe Antig, Industrial Waste Unit, (626) 458-5173
Gabriel Esparza, Industrial Waste Unit, (626) 458-5173

Beverly Hills Plating: Magdalena Ponce, Owner, (310) 271-1701

Report Prepared By: Greg V. Arthur, Environmental Engineer
January 30, 2008



1.0 Scope and Purpose

On October 9, 2007, EPA and the Los Angeles County Department of Public Works (LA County DPW) conducted a compliance evaluation inspection of Beverly Hills Plating in Beverly Hills, California. The purpose was to ensure compliance with the Federal regulations covering the discharge of non-domestic wastewaters into the sewers. In particular, it was to ensure:

- Classification in the proper Federal categories;
- Application of the correct standards at the correct sampling points;
- Consistent compliance with the standards; and
- Fulfillment of Federal self-monitoring requirements.

Beverly Hills Plating is a significant industrial user (“SIU”) within sewer service areas administered by the LA County DPW whose compliance was assessed as part of an on-going EPA evaluation of industrial users in EPA Region 9 by sector. The inspection participants are listed on the title page. Arthur conducted the inspection on October 9, 2007.

1.1 Process Description

Beverly Hills Plating is a job-shop restorer of antiques. The operations involve cleaning, silversmithing, re-silvering, decorative plating, polishing, and dry-booth spray lacquering. The base materials of the antiques are generally copper, brass, bronze, and pewter. The decorative metal finishing involves caustic cleaning, bright nickel plating, brass-cyanide plating, silver-cyanide strike and plating, copper-cyanide plating, acid-nickel plating, gold-cyanide plating, hydrochloric-acid etching and stripping, and sulfuric-acid activation. Beverly Hills Plating does not apply patinas or perform chemical oxidation antiquing.

Beverly Hills Plating does not own the antiques restored on-site. Operations began in the 1950's and were in the past more expansive. Beverly Hills Plating discharges non-domestic wastewaters to the Los Angeles County domestic sewers through a single sewer connection designated in this report by permit number as IWD-11094. Domestic sewage discharges through a separate connection downstream of the industrial wastewater connection. The operations follow below. The tank numbering is strictly by the EPA inspector for this report.

Tank Inventory and Volume (<i>rinses in italics</i>)					
gals	Decorative Plating and Prep		gals	Decorative Plating and Prep	
500	T1	caustic cleaning	500	T8	copper-cyanide plating
200	T2	<i>1^ostatic rinse for T1-T11</i>	300	T9	HCl-acid etch and strip
300	T3	<i>1^ostatic rinse for T1-T11</i>	300	T10	H ₂ SO ₄ -acid activation
500	T4	Watts nickel plating	200	T11	acid-nickel strike
400	T5	brass-cyanide plating	100	T12	gold-cyanide plating
200	T6	silver-cyanide strike	20	T13	<i>1^ostatic rinse for T13</i>
400	T7	silver-cyanide plating			



1.2 Facility SIC Code

Beverly Hills Plating is assigned the SIC codes for silverware, plated ware, and stainless steel (SIC 3914), and for electroplating (SIC 3471).

1.3 Facility Wastewater Sources

The decorative plating line generates spents, rinses, and polishing dust. There is a single non-domestic connection to the sewers fed by two continuously overflow rinses servicing the entire shop and one spent solution. The 2007 Los Angeles County DPW permit references the sewer sampling point in the approved plans submitted by Beverly Hills Plating.

Spent Solutions – The imparted contamination from the processing of parts and the progressive drop in solution strength results in the generation of spent solutions. The generation rate of spents depends on plating bath usage, effectiveness of bath contamination control, and the amount of drag-out lost into the rinses. Beverly Hills Plating delivers caustic cleaning spents to the sewers through a portable pump and hose. The shop owner indicated that all other solution tanks are regenerated strictly through additions. As a result, the only losses from these solution tanks are through the drag-out of solutions into two common continuous overflow rinses. Otherwise, these solution tanks without outlets would foul through contamination or fail through use. Hazardous waste manifest indicate that Beverly Hills Plating does not haul off-site for disposal any spent solutions. The list of baths follows below.

Baths Regenerated by Additions	Bath Vol	Baths Generating Spents	Spent Volume		
T4 - bright nickel-plating ①	500 gal	T1 - caustic cleaning ① circulation through activated carbon and filter cartridges	500 gal / -		
T5 - brass-cyanide plating	400 gal				
T6 - silver-cyanide strike	200 gal				
T7 - silver-cyanide plating	400 gal				
T8 - copper-cyanide plating	500 gal				
T9 - HCl-acid etch/strip	300 gal				
T10 - H ₂ SO ₄ -acid activation	300 gal				
T11 - nickel-acid strike	200 gal				
T12 - gold-cyanide plating	100 gal				
No Off-site Disposal				Discharged to the Sewers @ IWD-11094	

Rinses - Beverly Hills Plating employs two continuously overflowing rinses servicing all but one of solution tanks. The gold plating step is followed by a small static drag-out tank from which the spent rinses are returned to solution as make-up. The list of rinses follows below.

Rinses Returned as Make-Up	Rinse Vol	Rinses Disposed	Spent Volume
T13 - 1°static for T12	20 gal	T2 - 1°overflow for T1-11 T3 - 1°overflow for T1-11	<2900 gpd
No Off-site Disposal		Discharged to the Sewers @ IWD-11094	



Residuals - Beverly Hills Plating collects only polishing dust for off-site disposal as hazardous. The loss of solution through drag-out to the overflow rinses appears to be the primary, and likely the lone, explanation for the lack of the generation and disposal of spents. Beverly Hills Plating employs one static drag-out rinses for return as gold solution make-up and one acid activation step to neutralize the surface chemistry of a previous step, both practices that could marginally extend the useful life of the metal finishing solutions, but that do not explain the lack of generated spents and residuals.

The nickel tank filtration and the solution tanks themselves would be expected to accumulate bottom sludges and spent carbon filters for off-hauling. However, the manifests did not indicate the off-hauling of these residuals. No other residuals are expected to be generated on-site because Beverly Hills Plating provides no chemical treatment or preconditioning of any spent solutions, spent static rinses, or rinses.

1.4 Facility Process Wastewater Handling

Discharge - Untreated process wastewaters discharge to the sewers through a single connection designated in this report after the Los Angeles County DPW permit number as IWD-11094. The permit lists the maximum discharge flow as 2,976 gallons per day. *See* Figure 1.4 on the next page.

Composition - The process-related wastewaters listed in section 1.3 above would be expected to contain copper, chromium, lead, nickel, zinc, cyanide, and acidity, as well as oil & grease, salts, surfactants, paint grime, and other pollutants in the surface grime cleaned off of parts, as well as the minerals entrained in the water supply.

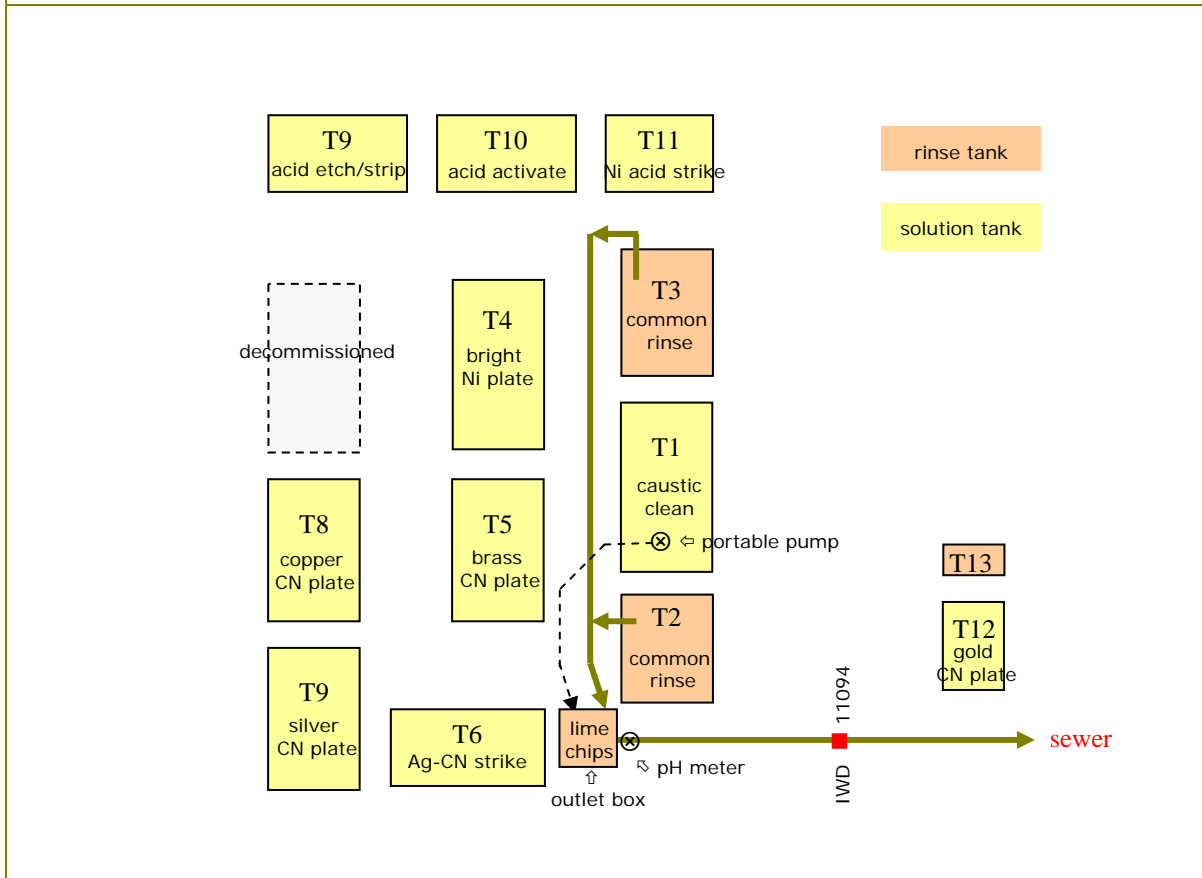
Delivery - The two overflow rinses discharge by gravity through hard-piping laid out beneath the raised shop floor to an outlet box into the sewers. Beverly Hills Plating also employs, as the only other acknowledged method of delivery, a portable pump and hose to drain alkaline spents to the sewer outlet box. The portable pumps and hoses could also be used to deliver other wastewaters to other destinations, for example, to the work sink. No floor drains were found. *See* the photos in Section 1.7 of this report. *Also* see Section 3.2 of this report.

Treatment - Beverly Hills Plating does not provide any treatment beyond passive flow through lime chips in the outlet box to the sewers. This treatment may provide some pH adjustment for acidic flow but does not remove metals or cyanide or any other pollutants.

Hazardous Waste Handling - Beverly Hills Plating collects only polishing dust for off-site disposal as hazardous. The waste manifests did not include any record of the off-hauling of spent solutions, spent carbon filters, spent lime chips, tank bottom sludges, or any other expected generated wastes.



Figure 1.4
Beverly Hills Plating - Configuration and Layout



1.5 POTW Legal Authorities

Los Angeles County Department of Public Works - The Los Angeles County DPW administers the pretreatment program in unincorporated county areas serviced by the regional Hyperion system. The Hyperion wastewater treatment plant operates under the requirements of the State of California, Los Angeles RWQCB's Waste Discharge Requirements, No. R4-2005-0020, issued to the City of Los Angeles in 2005. The WDRs, which also function as NPDES permit No. CA0109991, require the implementation of an approved pretreatment program throughout the sewer service area, extended into unincorporated areas and other municipalities through multi-jurisdictional agreements.

Under this authority, the Los Angeles County DPW issued temporary permit No. TEM11094 authorizing the discharge of non-domestic wastewater the sewers.

1.6 Sampling Record

Beverly Hills Plating self-monitors quarterly as required by the Los Angeles County DPW permit. The Los Angeles County DPW also collects its own samples twice per year.



1.7 Photo Documentation

Four of the nine photographs taken during this inspection are depicted below and saved as *beverlyhillsplating-1.jpg through -9.jpg*.



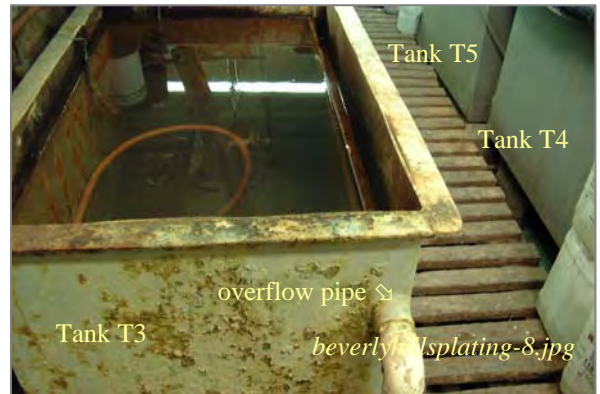
*Photo: Solution Transfer Pump and Hose
Taken By: Greg V. Arthur
Date: 10/09/07*



*Photo: Sewer Discharge Point
Taken By: Greg V. Arthur
Date: 10/09/07*



*Photo: Tank T2 - Continuous Overflow Rinse
Taken By: Greg V. Arthur
Date: 10/09/07*



*Photo: Tank T3 - Continuous Overflow Rinse
Taken By: Greg V. Arthur
Date: 010/09/07*



2.0 Sewer Discharge Standards and Limits

Federal categorical pretreatment standards (where they exist), national prohibitions, State groundwater, and the local limits (where they exist) must be applied to the sewered discharges from industrial users. (40 CFR 403.5 and 403.6).

Summary

The Federal standards in 40 CFR 413 for existing source job-shop metal finishers discharging less than 10,000 gallons per day apply to all process wastewater discharges from Beverly Hills Plating through IWD-11094. The Los Angeles County DPW permit correctly applied the Federal job-shop electroplating standards and the local limits. The application of Federal standards, national prohibitions, and local limits was determined through visual inspection. *See* Appendix 1.

Requirements

- The permit must prohibit dilution as a substitute for treatment necessary to comply with Federal standards.

Recommendations

- Part D of the permit should explicitly indicate which Federal standards apply.

2.1 Classification by Federal Point Source Category

Beverly Hills Plating qualifies as a job-shop metal finisher subject to the Federal job-shop electroplating standards for existing sources in 40 CFR 413 (<10,000 gallons per day). The Los Angeles County DPW correctly classified Beverly Hills Plating. However, the local permit does not explicitly indicate that only the abbreviated set of Federal standards for small discharges (<10,000 gallons per day) apply to Beverly Hills Plating.

New or Existing Sources – Beverly Hills Plating continues to be subject solely to the Federal standards for existing sources. Under the definitions in 40 CFR 403.3(k), a process constructed at an existing source job-shop metal finisher after August 31, 1982 is a new source (1) if it entirely replaces a process which caused a discharge from an existing source or (2) if it is substantially independent of the existing sources on-site. This means that after the 1982 deadline, the new source standards apply to the original installation of metal finishing lines, rebuilt or moved lines, or existing lines converted to do new operations. This also means that the new source standards generally do not apply to the piecemeal replacement of tanks for maintenance in otherwise intact metal finishing lines, nor do they apply to the upgrading of treatment without altering production lines. The preamble to the final 1988 Federal rule states that the new source standards apply when “an existing source undertakes major construction that legitimately provides it with the opportunity to install the best and most efficient production process and wastewater treatment technologies” (*Fed Register, Vol.53,*



No.200, October 17, 1988, p.40601). Beverly Hills Plating does not qualify as a new source because the configuration changes since 1983 did not involve either the new installation or the removal and reinstallation of the metal finishing lines that would also provide an opportunity to upgrade the production lines. The owner indicated that Beverly Hills Plating has only removed processing capability.

2.2 Local Limits and National Prohibitions

Local limits and the national prohibitions are meant to express the limitations on non-domestic discharges necessary to protect the sewers, treatment plants and their receiving waters from adverse impacts. In particular, they prohibit discharges that can cause the pass-through of pollutants into the receiving waters or into reuse, the operational interference of the sewage treatment works, the contamination of the sewage sludge, sewer worker health and safety risks, fire or explosive risks, and corrosive damage to the sewers. The national prohibitions apply nationwide to all non-domestic sewer discharges. The Los Angeles County DPW local limits extend the local limits enacted for the City of Los Angeles, and thus apply to non-domestic discharges in the Hyperion service area.

2.3 Federal Categorical Pretreatment Standards Existing Source Job-Shop Electroplating <10,000 gpd - 40 CFR 413

40 CFR 413 <10kgpd	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CNa	TTO	TM
daily-maximum (mg/l)	1.2	-	-	0.6	-	-	-	5.0	4.57	-
four-day average (mg/l)	0.7	-	-	0.4	-	-	-	2.7	-	-
stat conversion to mo-avgs	0.5	-	-	0.3	-	-	-	1.5	-	-

Applicability - The Federal job-shop electroplating standards apply to job-shop metal finishers that do not own more than 50% of the parts processed and were in operation in their present configuration before the August 31, 1982 proposal date of the Federal metal finishing rule. This means the job-shop electroplating standards in 40 CFR 413.14(b)(f), and 413.24(b)(f) for dischargers of less than 10,000 gallons per day apply to all of the process wastewater discharges at Beverly Hills Plating to the sewers through IWD-11094.

Basis of the Standards – The job-shop electroplating standards were based on a model pretreatment unit that comprises metals precipitation, settling, sludge removal, source control of toxic organics, and if necessary, cyanide destruction and chromium reduction. For dischargers of less than 10,000 gallons per day, the model pretreatment unit was applied only to process wastewaters bearing cadmium, lead, amenable cyanide, or total toxic organics. The best-available-technology standards were set where printed circuit board manufacturers and other job-shop metal finishers with model treatment operated at a long-term average and variability that achieved a compliance rate of 99% (1 in 100 chance of violation).

Adjustments – The Federal categorical pretreatment standards at IWD-11094 do not need to be adjusted to account for dilution or for dual Federal categories because all wastewaters through this compliance sampling point qualify as Federally-regulated under 40 CFR 413.



The Federal rules in 40 CFR 403.6 define domestic sewage and non-contact wastewaters to be dilution waters.

Compliance Deadline - Existing source job-shop metal finishers were required to comply with all Federal job-shop electroplating standards by the final compliance deadline of July 31, 1986.

2.4 Federal Prohibitions

The Federal standards in 40 CFR 403.6(d) and 403.17(d) prohibit dilution as a substitute for treatment, and the bypassing of any on-site treatment necessary to comply with standards, respectively. The Los Angeles County DPW permit does not explicitly state either prohibition.

2.5 Point(s) of Compliance

The permit refers to approved plans submitted by Beverly Hills Plating in designating the floor drain connection from the outlet box to the sewers as the sample point, IWD-11094.

Local Limits - Local limits and the national prohibitions apply end-of-pipe to all non-domestic flows from Beverly Hills Plating. The sample point designated in this report as IWD-11094 is a suitable end-of-pipe sample point representative of the day-to-day non-domestic wastewater discharges as long as the sampling also accounts for the discharge of the alkaline cleaners spents.

Federal Standards - Federal categorical pretreatment standards apply end-of-process-after-treatment to all Federally-regulated discharges to the sewers. The sample point IWD-11094 is also a suitable end-of-process-after-treatment sample point representative of the day-to-day discharge of Federally-regulated wastewaters as long as the sampling also accounts for the discharge of the alkaline cleaner spents.

2.6 Compliance Sampling

Local limits and the national prohibitions are instantaneous-maximums and are comparable to samples of any length including single grab samples. Federal categorical pretreatment standards are daily-maximums comparable to 24-hour composite samples. The 24-hour composite samples can be supplanted with single grabs or manually-composited grabs that are representative of the sampling day's discharge.



3.0 Compliance with Federal Standards

Industrial users must comply with the Federal categorical pretreatment standards that apply to their process wastewater discharges. 40 CFR 403.6(b).

Categorical industrial users must comply with the prohibition against dilution of the Federally-regulated waste streams as a substitute for treatment. 40 CFR 403.6(d).

Industrial users must comply with the provision restricting the bypass of treatment necessary to comply with any pretreatment standard or requirement. 40 CFR 403.17(d).

Beverly Hills Plating does not employ wastewater treatment equivalent to the models used in originally setting the Federal standards. Nevertheless without treatment, Beverly Hills Plating still may be able to achieve the consistent compliance expected of small job-shop metal finishers because of limited operations. However, the sampling results are not useable for determining compliance because uncontrolled rinses dilute the samples. *See* Appendix 2.

Requirements

- The final overflowing rinses must be retrofitted to operate on-demand.

Recommendations

- The on-demand retrofit could incorporate either conductivity probe controls or worker activated switches or timers.
- The sampling should account for discharges to the sewers of spent alkaline cleaners.
- The overflow rinses should be combined for cyanide destruction prior to discharge.

3.1 Sampling Results

The 2005-2007 sample records for Beverly Hills Plating collected from outlet box consists of quarterly self-monitoring and semi-annual sampling collected by the Los Angeles County DPW. All metals samples were 24-hour composites. The others were grabs. However, the sample results are not usable for determining compliance with the Federal standards because they are diluted by the continuous discharge of rinses. They also may not account for the discharge of spent alkaline cleaners to the sewers. *See* items 3.3 and 5.0 of this report

3.2 Best-Available-Technology Treatment

The sampling results indicate that Beverly Hills Plating, as currently designed and operated without treatment, nevertheless may be able to comply with its Federal standards for cadmium, lead, amenable cyanide, and toxic organics. All samples easily met all Federal



standards at IWD-11094, with average and calculated 99th% peak concentrations of 0.008 and 0.038 mg/l cadmium, 0.016 and 0.036 mg/l lead, 0.327 and 1.432 mg/l amenable cyanide, and 0.058 and 0.350 mg/l total toxic organics. However, these concentrations indicate levels well above the detection limits, especially for cyanide. These concentrations also would be expected to rise once dilution is eliminated through the incorporation of on-demand rinsing practices. As a result, it cannot be determined whether the expected increase in concentrations would be enough to warrant treatment once on-demand rinsing is instituted. Based on the sampling record, a retrofit to on-demand rinsing that reduces discharge by ~70% would result in a measurable chance of violating the Federal cyanide standards without added treatment. *See* section 4.3 of this report.

The sample record does not indicate whether discharges of alkaline cleaning spents would comply with the Federal standards. Violations would not be expected since the spents should entrain only trace amounts of cadmium, cyanide, lead and toxic organics.

3.3 Dilution as a Substitute for Treatment

The Federal standards in 40 CFR 403.6(d) prohibit "dilution as a substitute for treatment" in order to prevent compromising BAT model treatment with dilute waste streams. In particular, this prohibition applies when sample results for a diluted waste stream are below the Federal standards and the apparent compliance is used to justify discharge without treatment. There are two conditions that need to be established in order to make a determination of non-compliance with this prohibition. First, some or all of the Federally-regulated wastewaters must discharge without undergoing BAT model treatment or its equivalent. Second, there must be some form of excess water usage within a Federally-regulated process.

Beverly Hills Plating meets both conditions of non-compliance since all Federally-regulated waters discharge untreated and the rinses overflow irrespective of whether there are parts undergoing processing. It cannot be determined whether model treatment is necessary to consistently comply with the Federal standards until the overflowing rinses are retrofitted to operate and discharge on-demand. Typical on-demand controls include make-up water valves opened through conductivity-controlled probes or kick or knee plate switches.

3.4 Bypass Provision

The Federal standards in 40 CFR 403.17 prohibit the bypassing of any on-site treatment necessary to comply with standards unless the bypass was unavoidable to prevent the loss of life, injury, or property damage, and there were no feasible alternatives. This provision explicitly prohibits bypasses that are the result of a short-sighted lack of back-up equipment for normal downtimes or preventive maintenance. It also explicitly prohibits bypasses that could be prevented through wastewater retention or the procurement of auxiliary equipment. It specifically allows bypasses that do not result in violations of the standards as long as there is prior notice and approval from the sewerage agency or State. There cannot be bypassing at Beverly Hills Plating since the Federally-regulated wastewater do not undergo treatment that exceeds or is equivalent to the BAT model treatment.



4.0 Compliance with Local Limits and National Prohibitions

All non-domestic wastewater discharges to the sewers must comply with local limits and the national prohibitions. 40 CFR 403.5(a,b,d).

Industrial users must comply with the provision restricting the bypass of treatment necessary to comply with any pretreatment standard or requirement. 40 CFR 403.17(d).

The sample record indicates that Beverly Hills Plating, without pollutant controls, complies with its local limits for metals, cyanide, organics, flammability, and pH. Future compliance is not certain because concentrations are expected to rise in response to the implementation of on-demand rinsing. *See* Appendix 2 and Sections 3.0 and 5.0 of this report.

Requirements

- None.

Recommendations

- The alkaline cleaner spents should be pH adjusted in-tank prior to discharge to the sewers.
- The alkaline cleaner spents should not be drained, but rather metered to the outlet box.
- Parts should be spray rinsed over the static and solution tanks prior to final rinsing.
- Cyanide destruction through alkaline chlorination should be considered for the rinses.
- Possession on-site of any long hoses useable for the transfer of solutions and spents should be eliminated throughout the facility.

4.1 National Objectives

The general pretreatment regulations were promulgated in order to fulfill the national objectives to prevent the introduction of pollutants that:

- (1) cause operational interference with sewage treatment or sludge disposal,
- (2) pass-through sewage treatment into the receiving waters or sludge,
- (3) are in any way incompatible with the sewerage works, or
- (4) do not improve the opportunities to recycle municipal wastewaters and sludge.

This inspection did not include an evaluation of whether achievement of the national objectives in 40 CFR 403.2 have been demonstrated by the Hyperion wastewater treatment plant through consistent compliance with its sludge and discharge limits.



4.2 Local Limits for Oxygen Demanding Pollutants and The National Prohibition Against Interference

The process-related wastewaters discharged to the sewers are not expected to be high enough in organics strength to pose a risk of interference, with its strength expected to be significantly less than domestic sewage.

4.3 Local Limits for Toxic Metals, Cyanide, and Other Pollutants and The National Prohibition Against Pass-Through

Metals and Cyanide – There were no violations of the local limits for cadmium, chromium, copper, lead, nickel, silver, zinc, and cyanide. However, the concentrations of these pollutants would be expected to rise once dilution from excess rinsing is eliminated through the incorporation of on-demand rinsing. Based on the sampling record, a reduction in the flow rate ~30% through retrofitting to on-demand rinsing should result in a measurable chance of violating local limits, most notably for cyanide and copper. In all likelihood, reductions in flow without a reduction in the drag-out to the rinses would require the installation of treatment. Cyanide treatment typically involves cyanide destruction through alkaline chlorination which would require a reaction tank, pH and ORP metering, and caustic and bleach dosing. Treatment for copper would require additional reaction tanks for metals precipitation and settling, and additional pH monitoring and caustic dosing.

Toxic Organics – There are no local limits for toxic organics.

Oil and Grease – There were no violations of the local limits for oil and grease and none are expected in the future.

4.4 Local Limits for pH and Sulfides, Flammability and The National Prohibitions Against Safety Hazards and Corrosive Structural Damage

Sewer collection system interferences related to the formation of hydrogen sulfide and the resulting acidic disintegration of the sewers are not expected because the wastewaters discharged to the sewers are not high-strength in biodegradable organics. However, discharge does not undergo final pH adjustment to ensure neutral conditions in the sewers and an uncontrolled alkaline discharge of alkaline cleaner spents can result in safety hazards related to the release of toxic fumes and worker exposure risks. Flammability would not be expected because sampling shows that the discharges entrain negligible amounts of volatile organics.

4.5 The Prohibition Against Bypassing

Beverly Hills Plating has a portable pump and hose extension which can be stationed anywhere in the shop to delivery any solution to the outlet box. Maintaining only short hose lengths prevents the improper delivery to the sewers of the cyanide-based and acidic solutions, both of which are currently regenerated on-site strictly through additions.



5.0 Compliance with Federal Monitoring Requirements

Significant industrial users must self-monitor for all regulated parameters at least twice per year unless the sewerage agency monitors in place of self-monitoring. 40 CFR 403.12(e) & 403.12(g).

Each sample must be representative of the sampling day's operations. Sampling must be representative of the conditions occurring during the reporting period. 40 CFR 403.12(g) and 403.12(h).

The sample record for Beverly Hills Plating is representative of the continuous discharge of the final running rinses to the sewers over the sampling day. However, it is not clear that sampling captures the intermittent batch discharge of untreated spent alkaline cleaner. As a result, either separate sampling requirements must be extended to both the running rinse and the alkaline cleaner spents, or some form of combined discharge and sampling must be instituted. Finally, as long as the discharges are uncontrolled, cyanide, copper, pH, and flow need to be sampled more often for the sampling record to be representative over the six-month reporting period. The rest of the pollutants do not need to be sampled as frequently because they are present at concentrations well below the Federal standards and local limits.

Requirements

- The untreated alkaline cleaner spents must be sampled upon discharge from Tank 1 independently of the running rinse sampling from the outlet box.
- See Appendix 2 for the expected self-monitoring requirements defined for both the outlet box at IWD-11094 and for Tank 1 discharges.

Recommendations

- Beverly Hills Plating should consider the installation of a final equalization tank in order to allow the combined discharge and sampling of both the rinses and alkaline spents.
- Semi-annual reporting should include copies of the hazardous waste manifests documenting the off-hauling of spents, spent static rinses, and residuals.
- Beverly Hills Plating should submit to the Los Angeles County DPW a solvent management plan as defined in 40 CFR 413.03 of the Federal job-shop electroplating standards that at least (1) identifies all sources of methylene chloride and (2) institutes procedures to physically prevent all toxic organics from reaching the sewers.



Appendix 1
 Sewer Discharge Standards and Limits
 Beverly Hills Plating @ IWD-11094

pollutants of concern (mg/l)	Federal standards (d-max)	Federal standards (4d-avg)	nat'l pro- hibitions (instant)	local limits (d-max)	recommended monitoring frequency	
					outlet box	alk spents
arsenic	-	-	-	3.0	③	③
cadmium	1.2	0.7	-	15.0	1/six-mos	1/six-mos
chromium	-	-	-	10.0	③	③
copper	-	-	-	15.0	1/month	1/six-mos
lead	0.6	0.4	-	40	1/six-mos	1/six-mos
nickel	-	-	-	12.0	③	③
silver	-	-	-	5.0	③	③
zinc	-	-	-	25.0	③	③
total cyanide	-	-	-	10.0	1/month	1/six-mos
amenable cyanide	5.0	2.7	-	2.0	1/month	1/six-mos
total toxic organics ④	4.57	-	-	-	1/six-mos	1/six-mos
dissolved sulfides	-	-	-	0.1	③	③
oil and grease (total)	-	-	-	600	③	③
flow (gpd)	-	-	-	-	1/month	1/six-mos
pH (s.u.)	-	-	<5.0	6.0 - 11.0	continuous	1/six-mos
explosivity	-	-	<140°F ①	②	-	-

- ① Closed-cup flashpoint
- ② Narrative prohibition against the introduction of flammable or explosive substances
- ③ As part of periodic priority pollutant scans in order to identify changes in discharge quality
- ④ The Federal job-shop electroplating standards in 40 CFR 413 allow self-certifications to an approved solvent management plan in lieu of self-monitoring.



Appendix 2

Beverly Hills Plating Wastewater Discharge Quality @ IWD-11094

October 2005 - September 2007

pollutants ② (µg/l)	effluent sampling results				Fed violation rates		local	sample count
	mean	99th%	max	min	sample	period ③	sample	
arsenic	13.3	28.8	31	-	-	-	0/9	9
cadmium	7.8	37.8	41	<3	0/12	0/4	0/12	12
chromium	13.6	54.7	71	3	-	-	0/13	13
copper	739.	3340.	4380	79	-	-	0/13	13
lead	16.0	36.3	34	<5	0/13	0/4¼	0/13	13
nickel	428.	1093.	970	55	-	-	0/12	12
silver	80.3	232.	260	16	-	-	0/13	13
zinc	101.	250.	220	35	-	-	0/13	13
total cyanide	327.	1432.	1340	<20	-	-	0/7	7
amenable cyanide	161.	1012.	1340	<10	0/13	0/4¼	0/13	13
total toxic organics	57.6	350.	471	<10	0/13	0/4¼	0/13	13
dissolved sulfides	<40	<40	<40	<40	-	-	0/7	7
oil and grease (total)	2600	6100	4700	<1600	-	-	0/8	8
flow (gpd)	-	-	-	-	-	-	-	-
pH (s.u.)	7.2 ①	-	9.0	6.0	0/13	-	0/13	13
explosivity	-	-	-	-	-	-	-	-

① pH median

② No sample results for the following measurements and pollutants of concern: explosivity, flow

③ Four day-averages calculated by the rolling averaging of four consecutive samples