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

March 10, 2008

In Reply Refer To: WTR-7

Michael Young, General Manager
Faith Plating
7141 Santa Monica Blvd
West Hollywood, California 90046

Re: October 9, 2007 Clean Water Act Inspection

Dear Mr. Young:

Enclosed is the February 19, 2008 report for our October 9, 2007 inspection of Faith Plating. An administrative order to comply will be issued concurrently. Please submit a short response to the findings in Sections 2 through 5 of this report, to EPA, the LA County Department of Public Works, and the Regional Water Quality Control Board, by **April 28, 2008**.

The main findings are summarized below:

1 Faith Plating qualifies as an existing source job-shop metal finisher regulated under the Federal regulations in 40 CFR 413 for dischargers of over 10,000 gpd.

2 On-site treatment is substantially equivalent to the models used in setting the Federal standards, but has not resulted in consistent compliance, most likely because of operational deficiencies in treatment related to influent equalization and reaction end-points.

3 The quarterly self-monitoring is representative over the sampling day but not over the six-month reporting period. First, the sampling may not account for the intermittent discharge of batch treated spents. Second, because of violations some pollutants must be sampled more often, while others at or near their detection limits could be sampled less.

I appreciate your helpfulness extended to me during this inspection. I remain available to the LA 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,

Original signed by:

Greg V. Arthur
CWA Compliance Office

Enclosure

cc: Frank Chin, LA 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:	Faith Plating 7141 Santa Monica Blvd, West Hollywood, California 90046 Existing Source Job-Shop Electroplating (40 CFR 413)
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
Faith Plating:	Michael Young, General Manager, (323) 851-0100 Robert Long, Maintenance Manager, (323) 851-0100 Carlos Revelo, Maintenance, (323) 851-0100 Judy Saucedo, Administrative Assistant, (323) 851-0100

Report Prepared By:	Greg V. Arthur, Environmental Engineer March 10, 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 Faith Plating in West Hollywood, 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.

Faith 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

Faith Plating is a job-shop reconditioner of steel automotive bumpers and motorcycle parts, and a recycler of polyurethane bumpers. The operations on-site involve metal finishing on steel parts, washing of polyurethane parts, and abrasive polishing. The operations by processing line (line designations A-D added for the purposes of this report) follow below. Also ***see*** the tank inventory on the next page.

Nickel on Steel Plating Line "A" - alkaline cleaning, sulfuric-acid activation, Watts bright nickel plating, acid-copper plating, nickel strike, chromium plating, hot water dip.

Motorcycle Parts Line "B" - zincate coating, acid-copper strike, hydrochloric-acid pickling, acid-copper plating.

Stripping Line "C" - caustic stripping, sulfuric-acid electrostripping, hydrochloric-acid nickel/chrome stripping, hydrochloric-acid stripping.

Polyurethane Wash Line "D" - hot water dip.

Faith Plating does not own the parts it finishes. Operations began in 1948. Operations have contracted since 1983 in particular through the removal of the anodizing and cyanide-bearing plating processes. Faith 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-12557. Domestic sewage discharges through separate connections downstream of the industrial wastewater connection. The operations follow below. The tank numbering is strictly by the EPA inspector for this report but in some cases it incorporates the tank number labels observed on-site.

Tank Inventory and Volume (*rinses in italics*)					
gals	**Bumper Refinishing - Line A**		gals	**Motorcycle Parts Plating - Line B**	
450	A13	caustic cleaning	350	B11	zincate (decommissioned)
450	A14	*1ºon-demand for A13*	200	B13	H_2SO_4-acid electrostrip
450	A15	H_2SO_4-acid activation	200	B14	HCl-acid descale
450	A12	Watts nickel plating	450	B15	*1ºstatic rinse for B12-14*
1000	A16	*1ºon-demand for A12,15*	450	B16	copper plating holding
1600	A19	acid copper plating	200	B12	H_2SO_4-acid activation
1600	A20	acid copper plating	200	B17	zincate
450	A17	*1ºon-demand for A19-20*	200	B18	*1ºstatic rinse for Line B17*
250	A18	Ni-plate (decomm'd)	gals	**Stripping Room - Line C**	
1600	A21	Ni-activate (decomm'd)	1000	C1	caustic stripping
2000	A22	bright nickel plating	450	C2	H_2SO_4-acid electrostrip
1000	A23	nickel strike	800	C3	HCl strip (decommissioned)
1600	A24	bright nickel plating	450	C4	HCl-acid Ni/Cr strip
375	A28	*1ºon-demand for A22-24*	200	C5	*1ºstatic rinse for C1-4*
450	A25	caustic cleaner	1000	C6	*1ºstatic rinse for C1-4*
375	A26	*1ºon-demand for A25*	1000	C7	*1ºstatic rinse for C1-4*
375	A27	H_2SO_4-acid activation	50	C8	*1ºstatic rinse for C1-4*
1200	A31	chrome plating / *1ºspray*	gals	**Polyurethane Wash - Line D**	
450	A29	*2ºspray for A31*	500	D1	hot water dip
450	A32	*3ºon-demand for A31*	500	D2	hot water dip
450	A33	*4ºlow-overflow for A31*			
450	A38	hot water dip			

1.2 Facility SIC Code

Faith Plating is assigned the SIC code for plating, polishing, anodizing, and coloring (SIC 3471) and metals coating (SIC 3479).

1.3 Facility Wastewater Sources

The plating, stripping, washing, and polishing lines generate spents, rinses, residuals, and polishing dust. There is a single non-domestic connection to the sewers that receives contributions from the industrial wastewater treatment unit as its only source. The 2007 Los Angeles County DPW permit references but does not identify the sewer sampling point in the approved plans submitted by Faith 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 depends on plating bath usage, effectiveness of bath contamination control, and the amount of drag-out lost into the rinses or to the floor. Faith Plating delivers the spents from the caustic and acidic preparatory steps to on-site batch treatment by portable pump through standpipe connections into hard-piped collection sewers. Stripping spents are delivered by

portable pump and hose to drums for off-site disposal. The shop operators indicated that all other solution tanks are regenerated strictly through additions. The only losses from these "adds-only" solution tanks therefore would be through the drag-out of solutions into the rinses or onto the floor. Otherwise, these solution tanks without outlets would foul through contamination or fail through use. The list of baths follows below.

Baths Regenerated by Additions	Bath Vol
A12 - bright nickel plating	1000 gal
A19 - acid-copper plating ①	1600 gal
A20 - acid-copper plating ①	1600 gal
A22 - bright nickel plating ①	2000 gal
A23 - nickel strike plating ①	1000 gal
A24 - bright nickel plating ①	1600 gal
A31 - chrome plating	1200 gal
B12 - H_2SO_4 activation	200 gal
B13 - acid-copper strike	200 gal
B14 - HCl descale	200 gal
B17 - zincate	200 gal
No Off-Site Disposal	

Baths Generating Spents	SpentVolume
A13 - caustic cleaning	450 gal / -
A15 - H_2SO_4 activation	450 gal / -
A25 - caustic cleaning	450 gal / -
A27 - H_2SO_4 activation	375 gal / -
Discharged to the Sewers @ IWD-12557	

Baths Generating Spents	SpentVolume
C1 - caustic stripping	1000 gal/ -
C2 - H2SO4 electrostrip	450 gal / -
C4 - HCl-acid Ni/Cr strip	450 gal / -
Hauled Off-site as Hazardous	

① circulation through activated carbon and filter cartridges

Rinses - Faith Plating primarily employs first-stage on-demand overflow rinsing but also follows some processing steps with static rinses or further rinsing stages. The list of rinses and washdowns to the floor sumps follows below.

Rinses Discharged	RinseVol
A14 - 1° on-demand for A13	450 gal
A16 - 1° on-demand for A12/15	450 gal
A17 - 1° on-demand for A19/20	450 gal
A26 - 1° on-demand for A25	375 gal
A28 - 1° on-demand for A22-24	375 gal
A32 - 3° on-demand for A31	450 gal
A33 - 4° low-overflow for A31	450 gal
B15 - 1° static for B11/13/14	450 gal
B18 - 1° static for B12/17	450 gal
C5 - 1° static for C1-4	200 gal
C6 - 1° static for C1-4	1000 gal
C7 - 1° static for C1-4	1000 gal
C8 - 1° static for C1-4	50 gal
Discharged to the Sewers @ IWD-12557	

Rinses Disposed	RinseVol
A29 - 2° spray w/evap for A31	450 gal
Sludge Hauled Off-site as Hazardous	

Rinses/Washdown Discharged	RinseVol
Underfloor spills to sump	- unk -
Washdown of flooring to sump	? / 3 mos
Discharged to the Sewers @ IWD-12557	

Residuals - Faith Plating collects polishing dust, tank bottom sludges, stripping line spents, spent filter cartridges, cartridge carbon, and industrial wastewater treatment sludges for off-

site disposal as hazardous. The loss of solution through drag-out to the overflow rinses and the removal of chrome rinse tank bottom sludges appear to be the primary and likely only explanations for the lack of the generation and disposal of spents from the various plating steps (*acid-copper, bright nickel, nickel strike, copper strike, chromium*). Faith Plating does employ acid activation steps to neutralize the surface chemistry of preceding steps, a practice that could marginally extend the useful life of the metal finishing solutions. However, acid activation alone does not explain the lack of generated spents and residuals from the electroplating steps.

The in-tank filter units would be expected to accumulate spent carbon filters for off-hauling. Finally, the industrial wastewater treatment plant would be expected to generate filter press cake from the chemical treatment of both spent solutions and rinses.

1.4 Facility Process Wastewater Handling

Discharge - Treated process wastewaters discharge to the sewers through a single connection in the alley behind the facility designated in this report after the Los Angeles County DPW permit number as IWD-12557. The permit lists the average discharge flow as 9,346 gallons per day. Water billing averages were 12,685 gpd in 2007. ***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, and the minerals entrained in the water supply.

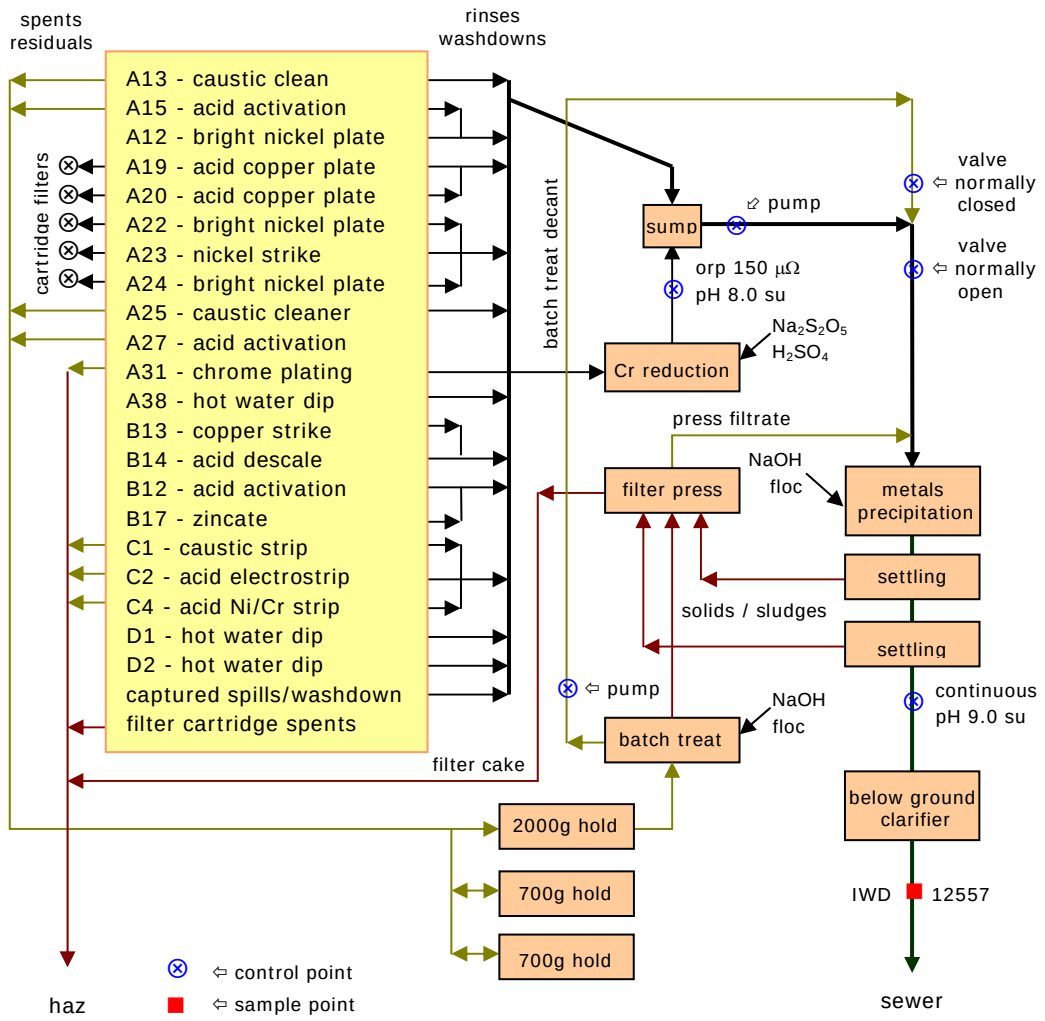
Delivery - The overflowing rinse tanks discharge by gravity through hard-piping underlain beneath the raised shop floor to the industrial wastewater treatment plant. Chrome-bearing rinses are separately piped to the chrome reduction unit of the industrial wastewater treatment plant. Solution spents are discharged by portable pump to a dedicated hard piping sewer system leading to the batch treatment unit of the industrial wastewater treatment plant. ***See*** the photos in Section 1.7 of this report. ***Also*** see Section 3.2 of this report.

Treatment - Faith Plating provides both continuous treatment of low-strength rinses and washdowns and batch treatment of high-strength spents for discharge through a below ground clarifier to the sewers. This treatment provides chromium reduction, metals precipitation, settling, and filter pressing of sludges. The chromium reduction step and the final clarifier after metals precipitation are controlled through continuous metering for pH as well as for ORP for chrome reduction. Faith Plating also provides filtration and carbon adsorption of a number of electroplating baths through in-tank circulation through cartridges.

1.5 Sampling Record

Faith 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.

Figure 1.4
Faith Plating - Configuration and Layout



1.6 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 City of Los Angeles 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 which is then extended into unincorporated areas and other municipalities through multi-jurisdictional agreements.

Under this authority, the Los Angeles County DPW issued permit No.P12557 authorizing the discharge of non-domestic wastewater the sewers.

1.7 Photo Documentation

Six of the 12 photographs taken during this inspection are depicted below and saved as *faithplating-1.jpg through -12.jpg.*

Photo: Underfloor drainage sump to treatment
Taken By: Greg V. Arthur
Date: 10/09/07

Photo: Spent delivery connection to batch treat
Taken By: Greg V. Arthur
Date: 10/09/07

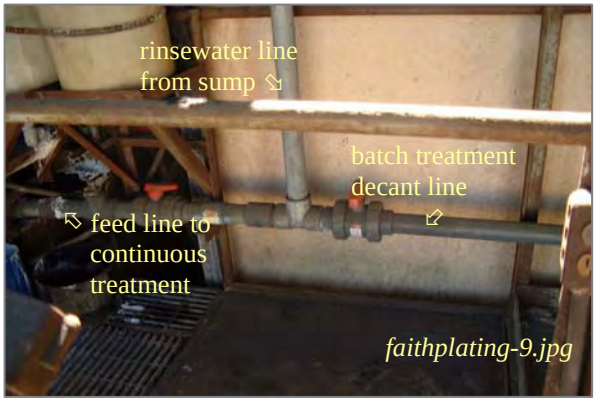


Photo: Closed valving to isolate batch treatment
Taken By: Greg V. Arthur
Date: 10/09/07

Photo: Portable pump and riser for connection
Taken By: Greg V. Arthur
Date: 010/09/07

Photo: Industrial wastewater treatment unit
Taken By: Greg V. Arthur
Date: 10/09/07

Photo: Dedicated batch treatment tanks
Taken By: Greg V. Arthur
Date: 10/09/07

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 over 10,000 gallons per day apply to all process wastewater discharges from Faith Plating through IWD-12557. An anodizing line that previously qualified as a new source was removed from service. The LA County DPW permit incorrectly advances combined standards reflecting the application of Federal standards for both new and existing sources. The permit correctly advances local limits. The application of Federal standards, national prohibitions, and local limits was determined through visual inspection. ***See*** Appendix 2.

Requirements

- Part D of the permit must apply only the Federal standards from 40 CFR 413 for existing source job-shop metal finishers discharging more than 10,000 gpd.
- The permit must prohibit dilution as a substitute for treatment necessary to comply with Federal standards.

Recommendations

- None.

2.1 Classification by Federal Point Source Category

Faith Plating qualifies as a job-shop metal finisher subject to the Federal job-shop common metals electroplating standards for existing sources in 40 CFR 413 Subpart A. Faith Plating removed from operation an anodizing line that qualified for regulation under 40 CFR 433 for metal finishing as a new source. The Los Angeles County DPW permit does not reflect this change and incorrectly has Faith Plating classified under both Federal standards.

<u>New or Existing Sources</u> – Faith Plating is now subject to Federal standards for only 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. In particular, the new source standards would apply when the installation of secondary containment involved the physical relocation and re-installation of entire lines. 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*).

Faith Plating no longer partially qualifies as a new source. An anodizing line added after 1983 qualified as a new source but that line has been removed. All remaining metal finishing lines, the stripping line, and the polyurethane wash line remain qualified as existing sources.

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 Subpart A

40 CFR 413 <10kgpd	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CNt	TTO	TM
daily-maximum (mg/l)	1.2	7.0	4.5	0.6	4.1	-	4.2	1.9	2.13	10.5
four-day average (mg/l)	0.7	4.0	2.7	0.4	2.6	-	2.6	1.0	-	6.8

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(c)(g), and 413.54(c)(g) for dischargers of more than 10,000 gallons per day apply to all of the process wastewater discharges from Faith Plating to the sewers through IWD-12557.

Flow Qualifications - The Federal job-shop electroplating standards set limits for an abbre-viated list of pollutants standards for dischargers of less than 10,000 gpd. This is an absolute qualification requiring the discharger to never exceed 10,000 gpd. Otherwise, with single or rare events exceeding the 10,000 gpd discharge cap, the full list of standards apply. The LA County DPW permit correctly applied the full list, although Part D refers to a discharge of less than 10,000 gpd. The permit cites an average discharge of process-related wastewater of 9,346 gpd, which is close enough to 10,000 gpd to make it likely that peak discharge days exceed the qualification cap. The 2007 water billing records support this conclusion.

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. 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-12557 do not need to be adjusted to account for multiple Federal categories or for dilution because all wastewaters through this compliance sampling point qualify as Federally-regulated under 40 CFR 413. The Federal standards in 40 CFR 413.03 also allow facilities with an approved solvent management plant to certify instead of sample for toxic organics.

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

2.4 Point(s) of Compliance

The permit, by reference to the permit application, designates the final underground clarifier outside the facility as the compliance point (designated in this report as IWD-12557).

Federal Standards - Federal categorical pretreatment standards apply end-of-process-after-treatment to all Federally-regulated discharges to the sewers. The sample point IWD-12557 is a suitable end-of-process-after-treatment sample point representative of the day-to-day discharge of Federally-regulated wastewaters from Faith Plating.

Local Limits - Local limits and the national prohibitions apply end-of-pipe to non-domestic flows. The sample point designated as IWD-12557 is a suitable end-of-pipe sample point representative of the day-to-day non-domestic wastewater discharges from Faith Plating.

2.5 Compliance Sampling

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 replaced with single grabs or manually-composited grabs that are representative of the sampling day's discharge.

2.6 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.

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).

Faith Plating employs wastewater treatment substantially equivalent to the models used in originally setting the Federal standards. Faith Plating has also instituted a number of controls expected to improve performance, most notably the hard-piping of spents to batch treatment, and the wide spread use of on-demand rinsing. However, Faith Plating has not consistently complied with the Federal standards, most likely because of deficiencies in the operation and control of wastewater treatment related to a lack of influent equalization and unreached reaction end-points. ***See*** Appendix 2.

Requirements

- Faith Plating must determine the cause or causes of inconsistent treatment performance in order to achieve consistent compliance with the Federal standards for chromium, copper, lead, and nickel.

Recommendations

- The treatment reaction steps should be operated in response to continuous reaction end-point monitoring.
- Influent equalization should be installed to ensure the consistent feed of low-strength wastewaters through the rinse water treatment unit.
- Treated wastewater from the batch treatment unit should be released for delivery to the rinse water treatment unit only after testing verifies compliance.

3.1 Sampling Results

The 2005-2007 sample records for Faith Plating collected from outlet box consists of quarterly self-monitoring and annual sampling collected by the Los Angeles County DPW. All metals samples were 24-hour composites. The others were grabs. ***See*** items 3.3 and 5.0 of this report.

3.2 Best-Available-Technology Treatment

Although Faith Plating is currently designed and operated with best-available-technology ("BAT") model treatment, the sampling results do not consistently comply with all of its Federal standards. The samples for cadmium, zinc, cyanide, and toxic organics easily met all Federal standards at IWD-12257, with average and calculated 99th% peak concentrations of 0.002 and 0.015 mg/l cadmium, 0.077 and 0.267 mg/l zinc, <0.020 mg/l total cyanide, and 0.005 and 0.013 mg/l total toxic organics. However, the samples for the other Federally-regulated pollutants are not indicative of consistent compliance, with average and calculated 99th% peak concentrations of 1.12 and 4.94 mg/l chromium, 1.64 and 9.11 mg/l copper, 0.49 and 4.49 mg/l lead, and 2.18 and 7.58 mg/l nickel. In addition, the results for chromium, copper, nickel, and zinc, together, also are not indicative of consistent compliance, with average and calculated 99th% peak concentrations of 5.26 and 21.13 mg/l total metals.

These sampling results indicate that the statistical probability of violating the Federal standards falls between 20 to 25% for any sampling day, and 50 to 60% for any set of four consecutive samples. Violation rates like these that are significantly higher than the 1% used in setting the Federal standards point to deficiencies in either the design or the operation of the model treatment. Faith Plating does possess treatment equivalent in design to the model treatment and there are aspects of improved control which would be expected to improve performance. However, there are also a few notable deficiencies in the design and operation observed during this inspection. The improvements (+) and deficiencies (-) are listed below.

+ Segregated sewer delivery and treatment for low-strength rinses and high-strength spents.
+ Multiple influent holding tanks for the batch treatment of spents.
+ Pumped control from tanks and sump to treatment.
- Pump surging without influent equalization or metering to the rinse water treatment unit from both the sump and the batch treatment unit.
- Incorrect reaction end-points for chrome reduction with an observed pH of 8.0 (not 2.5) s.u. and an observed ORP of 150 (not 280) μmhos/cm.
- No reaction end-point metering for pH in the metals precipitation reaction tank.
- No testing after batch treatment for compliance prior to release and delivery.

The sampling results reflect and are the result of the inconsistent performance of the existing model treatment at Faith Plating. The causes of this inconsistency appear to be related to operational deficiencies related to the on-site treatment and controls. However, inconsistent performance could also be related to inadequate capacity, or unidentified incompatible waste streams that are either untreatable themselves or interfere with treatment, or unidentified bypassing of untreated or partially treated wastewaters. In this inspection, EPA is able to identify the existence but cannot specify with certainty the causes of inconsistent performance.

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 particu-

lar, 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.

There is no evidence of dilution as a substitute for treatment since Faith Plating does not meet either condition of non-compliance. First, all Federally-regulated waters discharge through treatment. Second, all rinses are either on-demand or pumped to treatment.

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 were no observed methods of bypassing at Faith Plating. In fact, Faith Plating has incorporated robust methods of ensuring the hard-piped delivery of spents and rinses straight to the treatment units. As a result, there is no need for long hosing associated with portable pumping, and a reduction in the potential for an inadvertent bypass of 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 Faith Plating, even with the inconsistent performance of the pollutant controls, complies with all of its local limits for metals, cyanide, organics, sulfides, and pH, and would be expected to comply with the national prohibitions for flammability. ***See*** Appendix 2. ***Also*** see Sections 3.0 and 5.0 of this report.

Requirements

- None.

Recommendations

- None.

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

High-Strength Organics - 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 the organics strength significantly less than domestic sewage.

Metals and Cyanide - There were no violations of the local limits for arsenic, cadmium, chromium, copper, lead, nickel, silver, zinc, amenable cyanide, and total cyanide.

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 arsenic, cadmium, chromium, copper, lead, nickel, silver, zinc, amenable cyanide, and total cyanide, although the sample record indicates a slight possibility of a future violation of the nickel local limit.

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, and The National Prohibitions Against Safety Hazards and Corrosive Structural Damage

Corrosion - 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, nor acidic in nature. Furthermore, there were no violations of the local limits for pH and sulfides.

Flammability - Flammability would not be expected because sampling shows that the discharges to the sewer entrain negligible amounts of volatile organics.

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 Faith Plating appears representative of the discharge to the sewers over the sampling day but not over the six-month reporting period. In particular, sampling as it is currently required by permit may not capture the intermittent release of batch treated spents through the rinse water treatment unit. As a result, the sampling requirements must be set forth to apply to two separate conditions, (1) when treated spents feed through the rinse water treatment unit, and (2) when spents are not released for delivery to the rinse water treatment unit. Moreover, some pollutants need to be sampled more frequently because the sampling record establishes a significant potential to violate, while some others present at concentrations well below the Federal standards and local limits do not need to be sampled as frequently.

Requirements

- The overall discharge through IWD-12557 must be sampled at least once during each six-month reporting period when batch treated spents are released for delivery through the rinse water treatment unit.

- See Appendix 2 for the self- and county-monitoring requirements for IWD-12557 that would be considered to be representative of the discharge from Faith Plating.

Recommendations

- Faith Plating should consider the installation of a final equalization tank in order to allow the combined discharge and consolidated sampling of both the running rinse and batch treated spents.

- Faith Plating should submit a solvent management plan as set in 40 CFR 413.03.

- Semi-annual self-certification statements should include copies of the hazardous waste manifests documenting the off-hauling of spents, spent static rinses, and residuals.

- The discharge flow rate should be self-monitored.

Appendix 1
Sewer Discharge Standards and Limits
Faith Plating @ IWD-12557

pollutants of concern	Federal standards (d-max)	Federal standards (4d-avg)	national prohibit'n (instant)	local limits (d-max)	monitoring frequency for IWD-12557 discharger	county
arsenic	-	-	-	3.0	③	③
cadmium	1.2	0.7	-	15.0	1/six-mos	1/year
chromium	7.0	4.0	-	10.0	**1/month**	1/six-mos
copper	4.5	2.7	-	15.0	**1/month**	1/six-mos
lead	0.6	0.4	-	40	**1/month**	1/six-mos
nickel	4.1	2.6	-	12.0	**1/month**	1/six-mos
silver	-	-	-	5.0	③	③
zinc	4.2	2.6	-	25.0	1/six-mos	1/year
total cyanide	1.9	1.0	-	10.0	1/six-mos	1/year
amenable cyanide	-	-	-	2.0	③	③
total toxic organics	2.13	-	-	-	1/six-mos	1/year
total metals	10.5	6.8	-	-	**1/month**	1/six-mos
dissolved sulfides	-	-	-	0.1	③	③
oil and grease (total)	-	-	-	600	③	1/year
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	③	③

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

Appendix 2
Faith Plating Wastewater Discharge Quality @ IWD-12557
October 2005 - September 2007

pollutants ② (µg/l)	effluent sampling results				violation rate		sample count
	mean	99th%	min	max	sample	Period ③	
arsenic	<100	<100	-	<100	0/7	-	7
cadmium	2.4	15.3	<3	20	0/12	0/3	12
chromium	1114.9	4937.0	48	6160	0/14	0/3½	14
copper	1636.7	9105.1	33	11000	**2/14**	**1½/3½**	14
lead	494.0	4489.1	<5	6200	**1/13**	**1½/3¼**	13
mercury	-	-	-	-	-	-	-
nickel	2182.1	7583.0	390	8910	**2/14**	**2/3½**	14
silver	<50	<50	<3	<50	0/13	-	13
zinc	77.2	267.1	<10	300	0/13	0/3¼	13
total cyanide	5.2	12.6	<10	12	0/10	0/2½	10
amenable cyanide	<20	<20	<20	-	0/12	0/3	12
total toxic organics	53.1	109.6	<20	83	0/10	-	10
total metals	5254.8	21134.3	0.694	22000.0	**2/14**	**1½/3½**	14
oil+grease - petro (mg/l)	1.7	4.0	<1.6	3.7	0/8	-	8
flow (gpd) ①	12685	-	-	-	-	-	①
pH (s.u.)	10.0 ④	-	7.0	10.0	0/11	-	11
explosivity	-	-	-	-	-	-	-

① Flow results for domestic and non-domestic wastewaters taken from 2007 monthly water bills
② No sample results for the following pollutants of concern: mercury, explosivity
③ Four day-averages calculated by the rolling averaging of four consecutive samples
④ pH median

violation probability	mean (µg/l)	std dev (µg/l)	statistical probability	percent
Fed d-max - chromium	μ = 1114.9	σ = 1640.4	$\alpha(7000)$ = 0.0002	~0%
Fed d-max - copper	μ = 1636.7	σ = 3205.3	$\alpha(4500)$ = 0.1858	~20%
Fed d-max - lead	μ = 494.0	σ = 1714.6	$\alpha(600)$ = 0.4754	~40%
Fed d-max - nickel	μ = 2182.1	σ = 2318.0	$\alpha(4100)$ = 0.2040	~20%
Fed d-max - total metals	μ = 5254.8	σ = 6815.2	$\alpha(10500)$ = 0.2207	~25%
local d-max - nickel	μ = 2182.1	σ = 2318.0	$\alpha(12000)$ = 0.0001	~0%