



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

May 7, 2007

In Reply Refer To: WTR-7

Eric Gonzales, Manager
L & M Black Oxide
1019 Victory Place
Burbank, California 91502

Re: September 6, 2006 Clean Water Act Inspection

Dear Mr. Gonzales:

Enclosed is the May 7, 2007 report for our September 6, 2006 inspection of L&M Black Oxide in Burbank, California. Please submit a short response to the findings in Sections 2 through 4 of this report, to EPA, the City of Burbank, and the Regional Water Quality Control Board, by **June 30, 2007**.

The main findings are summarized below:

- 1 L&M Black Oxide qualifies as "zero-discharging" existing source job-shop metal finisher since it generates Federally-regulated process-related wastewaters but does not discharge to the sewers.
- 2 The local Burbank permit appropriately requires periodic self-certification of no discharge since compliance with Federal standards and local limits is achieved by not discharging to the sewers. Waste manifests should accompany the self-certifications.
- 3 The potential of an inadvertent or unauthorized discharge to the sewers should be minimized through (1) eliminating the use of long hoses, (2) ensuring all past connections to the sewer are permanently sealed, and (3) containing all potential sources of drainage within secondary containment.

I certainly appreciate your helpfulness extended to me during this inspection. I remain available to Burbank 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*

Greg V. Arthur
CWA Compliance Office

Enclosure

cc: Kristy Laird, Burbank



U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 9
CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION REPORT

Industrial User: L&M Black Oxide
1019 Victory Place, Burbank, California 91502
Zero Discharging Existing Source Job-Shop Metal Finisher
(40 CFR 413)

Treatment Works: City of Burbank
Burbank Water Reclamation Plant
(NPDES Permit CA0055531)

Dates of Inspection: September 6, 2006

Inspection Participants:

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

RWQCB-Los Angeles: None

City of Burbank: Kristy Laird Pickett, United Water, Inspector, (818) 972-1115 ex23
Jeff Carter, United Water, Supervisor, (818) 972-1115 ex17

L&M Black Oxide: Eric Gonzales, Manager, (818) 842-5149

Report Prepared By: Greg V. Arthur, Environmental Engineer

May 7, 2007



1.0 Scope and Purpose

On September 6, 2006 EPA and the City of Burbank conducted a compliance evaluation inspection of L&M Black Oxide in Burbank, California. The purpose was to ensure compliance with the Federal, State and local regulations covering the discharge of non-domestic wastewaters into the sewers under the Clean Water Act. In particular, it was to ensure:

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

L&M Black Oxide, located at 1019 Victory Place, would qualify as a categorical industrial user under the Clean Water Act within the Burbank sewer service area if it discharged process-related wastewaters to the sewers. The compliance of L&M Black Oxide was assessed through this inspection as part of an on-going EPA evaluation of industrial users in EPA Region 9 by industry sector. The inspection participants are listed on the title page. Arthur conducted the inspection on September 6, 2006.

1.1 Process Description

L&M Black Oxide is a metal finishing job-shop that provides black oxide coating of steel and stainless steel parts. The operations involve alkaline soap cleaning, hydrochloric-acid derust, caustic-nitric black oxide for steel coating, caustic-nitric black oxidation for stainless steel, wax sealing coat, and oil parts coating.

L&M Black Oxide does not own the parts it finishes. L&M Black Oxide began operations in 1950's and has not significantly changed in configuration over the past 25 years.

1.2 Facility SIC Code

L&M Black Oxide is assigned the SIC code for metals coating (SIC 3479).

1.3 Facility Wastewater Sources

There are no authorized process-related wastewater discharges from L&M Black Oxide to the Burbank sewers. There are a number of process-related wastewater spents and spent rinses that undergo in-tank boil-out and delivery of sludges for off-site disposal. For the purposes of this report, the tank designation numbers were made by the EPA inspector during this inspection.

Spent Solutions – The imparted contamination from the processing of parts and the progressive drop in solution strength results in the generation of spent solutions. According to L&M



Black Oxide, spent solutions for alkaline cleaning, acid derust, and black oxide for stainless steel are evaporated in-tank for off-site disposal of the sludges as hazardous. The list of spent solutions follows below.

Baths Generating Spents		Baths Not Generating Spents
T1 - alk soap cleaning T2 - HCl derust	T9 - NaOH-nitric black oxide for stainless steel	T4 - NaOH-nitric black oxide for steel T11 - wax application T12 - oil dip coating T13 - oil dip coating
In-Tank Evaporation / Off-site Hauling as Hazardous		Regenerated by Adds Only

Rinses – L&M Black Oxide employs a limited number of first- or second-stage static rinses. There are no overflow rinses. Spent static rinses are delivered by pump to a standpipe for hard-piped delivery to an on-site evaporator. The list of rinses follows below. *See* the photos depicted in section 1.5 of this report.

Rinses Not Discharged		Rinses Discharged
T3 - 1° spray static for T1 T5 - 1° static drag-out for T4 T6 - 1° static drag-out for T4 T10 - 1° static for T9	T7 - 2° overtank spray for T4 T8 - 2° overtank spray for T4	None
In-Tank Evaporation / Off-site Hauling as Hazardous		Discharged to the Sewers

Residuals – According to the Manager, L&M Black Oxide hauls off-site for disposal as hazardous the boil-out evaporation sludges. There were drums of sludge throughout the facility from the processing area near the front bay door to the back near the bathrooms. No other residuals are generated on-site because L&M Black Oxide provides no chemical treatment or preconditioning of any spent solutions or spent static rinses. *See* the photos in Section 1.5.

Secondary Containment - L&M Black Oxide does not employ full secondary containment. The dirt floor was heavily encrusted with the black oxide grime.

1.4 Facility Process Wastewater Handling

L&M Black Oxide is configured to operate as a zero-discharger that generates but does not discharge process-related wastewaters to the sewers. As a result, L&M Black Oxide does not provide any wastewater treatment beyond the evaporation of spents and spent static rinses. L&M Black Oxide asserts that all spent solutions, secondary containment drainage, evaporated sludges, and debris are hauled off-site for disposal as hazardous. Operating as a zero-discharger is made less difficult because the bath quality for decorative black oxide is not critical. *See* the photos on the next page in section 1.5 of this report.



Composition - The process wastewaters listed in section 1.3 above would be expected to contain caustic, nitrates, surfactants, copper, chromium, nickel, zinc, oils, and acidity.

Delivery - L&M Black Oxide uses a small portable pump and hosing to transfer spents and spent rinses to barrels for storage prior to off-site disposal. The barrels are stored on-site.

Evaporation - Spents and spent rinses are reduced in volume simply through heating up the tank contents.

1.5 Photo Documentation

Three of four photographs taken during this inspection are depicted below and saved as *lblackoxide-1.jpg* through *lblackoxide-4.jpg*. The photo not depicted was a duplicate.



Photo: Black Oxide Line
Taken By: Greg V. Arthur
Date: 09/06/06



Photo: Portable Pump and Hosing
Taken By: Greg V. Arthur
Date: 09/06/06



Photo: Back of the shop
Taken By: Greg V. Arthur
Date: 09/06/06

Comments -This shows the proximity of the bathroom connection to both the solution tanks and the sludge storage barrels. This also shows staining on the floor from past spills of metal finishing solutions.



1.6 POTW Legal Authorities

The City of Burbank – Burbank operates a wastewater treatment plant, which discharges to the Los Angeles River, and an approved pretreatment program, as required by the State of California in the Los Angeles RWQCB's Waste Discharge Requirements, No. R4-2006-0085, reissued to Burbank in 2006 and serving as NPDES Permit No. CA0055531. Burbank has established a sewer use ordinance that applies to all industrial users within its city limits. Under this authority, Burbank issued industrial user permit No.1040 authorizing discharge of only domestic wastewaters from L&M Black Oxide to the sewers.

1.7 Sampling Record

There are no compliance samples since L&M Black Oxide is not authorized to discharge under the Burbank industrial user permit No. 1040.



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 sewer discharges from industrial users. (40 CFR 403.5 and 403.6).

Summary

No Federal categorical pretreatment standards, national prohibitions, or local limits apply because there are no process-related wastewater discharges to the sewers. However, L&M Black Oxide does generate wastewaters that if discharged would be regulated under the Federal job-shop electroplating standards, the national prohibitions, and the local limits. The application of Federal standards, national prohibitions, and local limits was determined through visual inspection.

Requirements

- None.

Recommendations

- The Burbank permit should also list the Federal standards that would apply if process-related wastewaters were discharged to the sewers.

2.1 Classification by Federal Point Source Category

L&M Black Oxide would qualify as an existing source job-shop metal finisher subject to the Federal standards in 40 CFR 413, if its process-related wastewaters were discharged to the sewers. L&M Black Oxide would not qualify as a new source metal finisher because it began operations before the August 31, 1982 promulgation date of the metal finishing rule for new sources in 40 CFR 433. No process would qualify under any other Federal rule in 40 CFR 407-471.

2.2 Local Limits and National Prohibitions

Local limits and national prohibitions would apply to any discharge of the process-related wastewaters generated on-site. Local limits and national prohibitions are meant to express the limitations on non-domestic discharges necessary to protect the sewers, treatment plants, treatment plant sludges, and their receiving waters from adverse impacts. Generally, technically-based numerical local limits supplant national prohibitions.



**2.3 Federal Categorical Pretreatment Standards
 Existing Source Job-Shop Electroplating - 40 CFR 413**

40 CFR 413	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CNt	CNa	TTO	TM
daily-maximum (mg/l)	1.2	7.0	4.5	0.6	4.1	-	4.2	1.9	5.0	2.13*	10.5
four-day average (mg/l)	0.7	4.0	2.7	0.4	2.6	-	2.6	1.0	2.7	-	6.8
stat conversion to mo-avgs	0.5	2.5	1.8	0.3	1.8	-	1.8	0.55	1.5	-	5.0
bold - the only standards that apply if the discharge is <10,000 gpd / * TTO 4.57 mg/l											

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. The job-shop electroplating standards in 40 CFR 413.54(b)(f) would apply to any discharges of under 10,000 gallons per day of process wastewaters from L&M Black Oxide to the sewers.

2.4 Pollutants of Concern

There are no pollutants of concern as long as L&M Black Oxide does not discharge its process-related wastewaters. The pollutants of concern would comprise those regulated by the Federal existing source job-shop electroplating standards (*cadmium, lead, amenable cyanide, TTO*), national prohibitions (*pH*), and certain local limits for which there is a potential to exceed the local limits (*chromium, copper, nickel, zinc, total dissolved solids, oil & grease, pH*).

2.5 Compliance Sampling

There are no identified process-related wastewater discharges to the sewers. As a result, there are no sampling points for the non-domestic wastewaters.



3.0 Compliance with Federal Standards, National Prohibitions, and Local Limits

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).

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

Summary

L&M Black Oxide can only achieve compliance with the applicable Federal standards, national prohibitions, and local limits by not discharging any of the generated process-related wastewaters to the sewers. L&M Black Oxide has the ability to operate as a "zero-discharge" facility in particular, (1) because the tank contents are boiled down to reduce the volume of spents and spent rinses requiring disposal, and (2) because the quality requirements for black oxide baths are not critical. On the other hand, L&M Black Oxide also possesses the physical ability for an inadvertent or unauthorized discharge of process-related wastewaters to the sewers. Solutions are transferred from tank to barrel through the use of a portable pump outfitted with hosing long enough to extend to any part of the shop, including to the bathroom sewer connections. Moreover, waste storage barrels, the transfer pump and hosing, and other sources of chemical solution drainage were not located within secondary containment.

Requirements

- L&M Black Oxide must ensure secondary containment of all solution tanks, rinse tanks, sludge storage barrels, and any equipment that can drain out onto the floor.

Recommendations

- L&M Black Oxide should eliminate the possession on-site of long hoses currently used in the transfer and delivery of solutions and wastewaters throughout the facility.
- Old sewer connections and piping should be verified as permanently sealed and removed.

3.1 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 Burbank wastewater treatment plant through consistent compliance with their sludge and discharge limits.

3.2 Compliance with Standards and Limits

L&M Black Oxide has the ability to comply with Federal standards and local limits by operating as a “zero-discharger” facility. In particular, the tank contents are evaporated by in-tank boil down procedures to reduce the volume of spents and spent rinses requiring disposal. In addition, the quality requirements for the black oxide and alkaline/acidic preconditioning baths are not critical enough to result in a frequent need to change-out solutions and rinses for disposal. Both of these operational conditions lessen the risk and opportunity of an inadvertent or unauthorized discharge to the sewers.

As a result, full compliance depends on the successful and consistent evaporation and delivery of all spent residuals including evaporated tank bottoms, from the boil-out tanks into barrels for hauling off-site as hazardous. Any inadvertent or unauthorized discharge of any process-related wastewaters of any quality to the sewers would violate the local limits as expressed in the Burbank permit as a narrative prohibition against discharge. Any inadvertent or unauthorized discharge likely would also violate the numerical Federal standards and local limits since there is no on-site treatment to remove metals or adjust the pH.

On the other hand, L&M Black Oxide does possess the physical ability to discharge process-related wastewaters to the sewers. Solutions are transferred from tank to tank or from tank to barrel through the use of a portable pump and hose long enough to extend to any part of the shop, including to the bathroom sewer connections. Moreover, waste storage barrels, and the transfer pump and hose, were not located within secondary containment. Maintaining only short hose lengths and containing all potential sources of chemical drainage wastewater within secondary containment prevents the inadvertent or unauthorized delivery of wastewater to improper disposal points. *See* the photos in section 1.5 of this report.

3.3 Dilution and Bypassing

The Federal standards in 40 CFR 403.6(d) and 403.17(d) prohibit “dilution as a substitute for treatment” and “bypassing any treatment necessary to comply with standards. There is no possibility to violate the prohibition against dilution as a substitute for treatment since L&M Black Oxide does not provide wastewater treatment nor discharge wastewaters to the sewers. On the other hand, an inadvertent or unauthorized discharge to the sewers would violate the prohibition against bypassing since compliance with Federal standards and local limits is achieved through the capture and off-hauling of all wastewaters.



4.0 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).

Summary

L&M Black Oxide does not qualify as a significant industrial user since it does not discharge its Federally-regulated wastewaters to the sewers. As a result, it is not necessary for Burbank to issue a permit with self-monitoring requirements. However, since L&M Black Oxide can only achieve compliance with the Federal job-shop electroplating standards, national prohibitions, and local limits through zero-discharge practices, it is appropriate that Burbank has issued a "zero-discharge" permit that substitutes a written certification of no discharge in lieu of semi-annual self-monitoring. This inspection did not include a review of the waste manifests. No conclusion can be made at this time regarding whether the manifests account for the wastewaters generated by L&M Black Oxide.

Requirements

- None.

Recommendations

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