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

Oct 08, 2004

In Reply Refer To: WTR-7

Jeff Parrish, Safety, Envr & Facilities Director
Aero Union Corporation
100 Lockheed Avenue
Chico, California 95973

Dear Mr. Parrish:

Enclosed is the report for EPA's June 10, 2004, compliance evaluation inspection of Aero Union. We request that you submit a short response to each specific finding in the numbered items 2.0 - 5.0 of this report by November 30, 2004.

This inspection was one of many that we conducted as part of our evaluation of the City's program to control non-domestic discharges into its sewers. EPA will issue an overall report to the City later this month. The main findings regarding Aero Union are summarized below:

1 Chico has not issued a permit because Aero Union does not discharge process-related wastewater. Aero Union would qualify as a metal finisher subject to Federal standards if it discharged its process-related wastewaters to the sewers.

2 Issuing zero-discharge permits is a good practice for sewer districts with industrial users who comply with the Clean Water Act through their efforts to not discharge.

We thank you for your cooperation during our inspection. Please send copies of any submittal to the City of Chico as well as to us. If you have any questions, please feel free to contact me at (415) 972-3504 or by e-mail at arthur.greg@epa.gov.

Sincerely yours,

Original signed by:
Greg V. Arthur

Greg V. Arthur, Envr. Engr.
CWA Compliance Office

Enclosure

cc: Ron Manwill, City of Chico
Nolan Randall, RWQCB-Redding

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 9

CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION REPORT

Industrial User:	Aero Union Corporation 100 Lockheed Avenue, Chico, California 95973 Zero-Discharging Metal Finishing (40 CFR 433)
Treatment Works:	Chico Water Pollution Control Plant (NPDES Permit CA0079081)
Date of Inspection:	June 10, 2004

Inspection Participants:

US EPA:	Greg V. Arthur, CWA Compliance Office, (415) 972-3504
RWQCB:	No Representative
City of Chico:	Ron Manwill, Industrial Waste Inspector, (530) 895-4967
Aero Union:	Jeff Parrish, Safety, Envr & Facilities Director, (530) 230-1717 Tom Miles, Production Manager, (530) 230-1874

Report Prepared By:	Greg V. Arthur, Environmental Engineer September 30, 2004

Section 1

Introduction and Background

1.0 Scope and Purpose

On June 10, 2004, EPA conducted a compliance evaluation inspection of Aero Union Corporation in Chico. 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 points;
- Consistent compliance with the standards; and
- Fulfillment of Federal self-monitoring requirements.

Aero Union is one of six industrial users in Chico service area whose compliance was assessed as part of EPA's 2004 evaluation of the Chico pretreatment program. Chico and Aero Union received individual reports. The inspection participants are listed on the title page. Arthur conducted the inspection on June 10.

1.1 Process Description

Aero Union consists of two divisions housed in nine buildings at the Chico airport. The Airborne Systems Division manufactures aircraft assemblies, such as belly tanks for fire retardant dispersal, tank assemblies for aircraft fueling and aerial fire fighting, aircraft sensor mounts, and in the past, powered roller cargo handling assemblies for air freight aircraft. The Air Tanker Operations division operates and maintains a fleet of fire fighting aircraft. The operations by building are as follows:

- Fortress Bldg – staging, assembly, tooling
- Boeing Bldg – air tanker maintenance, machining, air tanker tank manufacturing, dry paint booths, alodining, fire retardant preparation
- Marauder Bldg – fiber composite lay-up, circumference seam welding, fiberglass molding
- Other Bldgs – 2 aircraft hangers, 2 warehouses, 2 administrative buildings

The alodining is performed ad-hoc on or within the work pieces as needed. Aerial fire retardants generally are formulated from water mixed with a powder of ammonium phosphates, clay or gum thickeners, coloring agents, and corrosion inhibitors.

Section 1 – Introduction and Background

1.2 Waste Streams and Wastewater Handling

Aero Union does not discharge process-related wastewaters to the sewers. Spent machine shop coolants, fire retardant formulation, and alodine solutions are hauled off-site.

1.3 Wastewater Discharge Permitting

Chico has not issued a permit to Aero Union since there is no discharge of process-related wastewaters to the Chico sewers. The Chico sewer use ordinance authorizes permitting that establishes self-monitoring requirements, sampling protocols and the general provisions of the municipal code (§15.40.020) that apply to all non-domestic discharges to the Chico sewers, as well as local limits for the discharge of pollutants to the sewer (§15.40.060).

Section 2

Sewer Discharge Standards and Limits

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

2.0 Summary

No standards apply because no process-related wastewaters discharge to the sewers. The Federal metal finishing standards in 40 CFR 433 would apply if the process wastewaters were discharged. While not required by the Federal rules, issuing zero-discharge permits is a good practice for sewer districts with industrial users who comply with the Clean Water Act through their efforts to not discharge.

Requirements

- None.

Recommendations

- Aero Union should periodically certify that it does not discharge, and periodically report its off-hauled waste amounts.
- A zero-discharge permit should explicitly prohibit process-related wastewaters discharges to the sewers, and require 'no discharge' self-certifications and waste off-hauling reports.

2.1 Classification by Federal Point Source Category

Aero Union would qualify as a metal finishing operation subject to the Federal metal finishing standards in 40 CFR 433 if it were to discharge process-related wastewater to the sewers.

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

Section 2 – Sewer Discharge Standards and Limits

the sewerage 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 Chico local limits apply to non-domestic discharges in its service area.

2.3 Federal Categorical Pretreatment Standards
Metal Finishing - 40 CFR 433

Applicability - Under 40 CFR 433.10(a), the metal finishing standards would apply to the process wastewaters from Aero Union if they discharged to the sewers, because the operations involve chemical coating (alodine). The metal finishing standard "…apply to plants that perform…" electroplating, electroless plating, anodizing, chemical coating, etching, or printed circuit board manufacturing and they extend to other associated operations such as cleaning, machining, assembly, and testing, specifically listed in 40 CFR 433.10(a). If a core operation is performed, no matter how small or infrequently, the standards apply to waste-waters from any core or associated operation, irrespective of whether the core discharges.

Standards - The standards for existing sources in 40 CFR 433.15 for the metal finishing that would apply to wastewaters if they discharged from Aero Union follow below.

Existing Source ("pses") Standards from 40 CFR 433.15

(in mg/l)	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CN(t)	CN(a)	TTO
Daily-Max	0.69	2.77	3.38	0.69	3.98	0.43	2.61	1.20	0.86	2.13
Month-Avg	0.26	1.71	2.07	0.43	2.38	0.24	1.48	0.65	0.32	-

Basis of the Standards - The existing source metal finishing 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 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).

2.4 Points of Compliance and Self-Monitoring

There are no compliance sampling points as long as Aero Union does not discharge process-related wastewaters to the sewers.

2.5 Pollutants of Concern

There are no pollutants of concern since Aero Union does not discharge process-related wastewaters to the sewers. As a result, the permit does not have to advance Federal standards

Section 2 – Sewer Discharge Standards and Limits

or local limits or require self-monitoring. Instead, the permit should require every six-months, a self-certification of no discharge, and a self-disclosure of the amount of process-related wastes hauled off-site (*alodine solutions, test waters, machining coolants*).

Section 3

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).

3.0 Summary

Aero Union complies with the Federal metal finishing standard by not discharging process wastewaters to the sewers. The facility consistently complies because it is configured to collect and off-haul spents for disposal.

Requirements

- None.

Recommendations

- Any floor drains, if they exist, should be sealed.

3.1 Zero-Discharge Procedures

If there are any floor drains, sewer clean-outs, or any other inlets to the sewers, then the disposal off-site of all process-related wastewaters at Aero Union depends on operators to contain and off-haul wastes. Aero Union can better guarantee the proper disposal of process-related wastewaters through built-in prevention against disposal to the sewers. In particular, the most obvious preventive built-in would be the sealing of any non-bathroom sewer inlet. Zero-discharging exceeds in performance the design of the model treatment used in originally setting the Federal standards.

Section 3 – Compliance with Federal Standards

3.2 Dilution as a Substitute for Treatment

There is no violation of the prohibition against "dilution as a substitute for treatment" as long as Aero Union continues to operate as designed and does not discharge any process-related wastewaters to the sewers.

The Federal standards in 40 CFR 403.6(d) prohibit "dilution as a substitute for treatment" in order to prevent compromising model best-available-technology treatment with dilute waste streams. This prohibition applies when samples of a diluted waste stream are found to be 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. First, some or all of the Federally-regulated wastewaters must discharge without undergoing best-available-technology treatment or its equivalent. Second, there must be some form of excess water usage within a Federally-regulated process. Aero Union satisfies neither condition.

3.3 Bypass Provision

The Federal standards in 40 CFR 403.17(d) 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. Non-compliance is established by determining that a waste-water requiring on-site treatment discharges un-treated. Aero Union does not provide treatment but rather relies on the collection and off-site disposal of process-related wastewaters to comply with both Federal standards and local limits. As a result, at Aero Union bypassing is established simply if process-related wastewaters discharge to the sewers.

At zero-discharging facilities like Aero Union, one of the more common methods of bypassing to the sewers has been by portable pump into a bathroom clean-out, often times at the hand of a disgruntled or poorly trained employee. The result of bypassing untreated process-related wastewaters can include even the failure of the municipal sewage treatment plant and the resulting discharge of the sewer district’s untreated sewage to the waterways. Bypassing also often qualifies as a “willful or negligent” violation of the Clean Water Act and thus subject to criminal sanctions.

For these reasons, Aero Union should not only seal all non-bathroom sewer inlets but also ensure that there are no portable pumps with delivery hoses long enough to reach any bathroom connections and clean-outs.

Section 4

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).

4.0 Summary

Aero Union is configured to not discharge process-related wastewaters to the sewers, and as a result, achieves consistent compliance with the local limits associated with the performance of the Chico wastewater treatment plant. See sections 3.1-3.3 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 evaluation did not include an evaluation of whether achievement of the national objectives in 40 CFR 403.2 have been demonstrated by consistent compliance with the sludge and discharge limits at the Chico wastewater treatment plant. That analysis will be available later as part of the EPA evaluation report for Chico. Nevertheless, because Aero Union does not discharge process-related wastewaters, it can continue to operate as currently configured irrespective of whether the objectives are found to have been achieved in Chico.

Section 5

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) & 403.12(h).

5.0 Summary

There are no monitoring requirements because there is no discharge of process-related wastewaters from Aero Union.

Requirements

- None.

Recommendations

- None.