# SAMPLE PERMIT
# FACT SHEET

[Enter **Issuance Date, Renewal Date, or Amendment Date** of permit]**:** [***Today's d*ate**]

**[Note: This sample permit fact sheet was developed to accompany the sample permit.]**

## A. INDUSTRIAL USER INFORMATION

[Name of facility]
[**Facility location address**]
[**City, State, ZIP Code**]

[**Contact person's name**], [**Title**]
[**Telephone number**]

[**Permit number**]

## B. DESCRIPTION OF FACILITY OPERATIONS

[**Name of facility**] is engaged primarily in specialty precious metal plating (silver and gold), NAICS Code 332813. The core operation(s) performed at the facility are gold and silver electroplating. Ancillary operations include cleaning, grinding, polishing, and tumbling.

The facility has two small electroplating lines. It conducts specialty jewelry plating. Before any electroplating, all jewelry pieces are cleaned using a mild acid bath; polished; and, if necessary, ground and tumbled. The basis materials for plating are zinc alloys, nickel alloys, copper, silver, or brass.

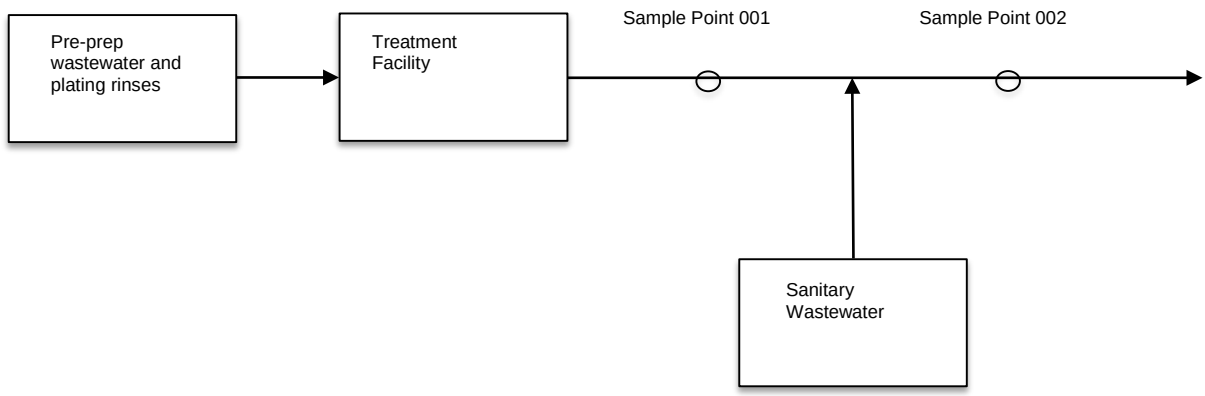
The gold electroplating line consists of three different heated (about 140 degrees Fahrenheit), cyanide-free gold baths—14K, 18K, and 24K. The pieces to be plated are placed in the desired gold bath for 15 to 30 seconds. The plated pieces are then rinsed in a hot water bath. The hot water rinse bath is in continuous overflow when in use, and the rinse overflow is discharged to the POTW. The gold baths are never discharged to the POTW. When the liquid level of the gold baths drops below a designated point (from evaporation), the facility adds hot water from the gold rinse tanks to the gold baths to bring the volume back up to the original level.

The silver electroplating line consists on one cyanide-free silver bath, which is not heated. Pieces are plated in the silver bath at 15-second intervals. The pieces are checked between plating operations to ensure that the desired result is achieved. Some pieces might require several repetitive dips. Once a piece is plated, it is rinsed under running hot water. All the rinse water is discharged to the POTW. The silver bath is never discharged to the POTW.

[**Name of facility**] began operations at the facility on October 15, 1985. [**Name of facility**] employs six personnel and operates 5 days a week (Monday through Friday), 10 a.m. to 6:30 p.m.

## C. SAMPLE POINT DESCRIPTION/FACILITY FLOW INFORMATION

| INDUSTRIAL WASTEWATER PERMIT | SAMPLE POINT | FLOW PER OPERATIONAL DAY (gpd) | | DESCRIPTION |
|---|---|---|---|---|
| | | TOTAL | PROCESS | |
| [**Number**] | 001 | 160 gpd | 160 gpd | Sample point 001 is at the Parshall flume, which is after the facility's wastewater treatment system. It is in the southeast corner of Building A. The wastewaters discharged through the sampling point include pre-prep wastewater (from cleaning, polishing, and grinding) and plating rinse waters. Sampling point 001 is considered the end-of-process sampling point.<br><br>Pollutants expected to be present include cadmium, copper, lead, |
| | 002 | 450 gpd | 160 gpd | Sample point 002 is at the manhole in the southwest parking lot. The wastewater discharged through this sampling point includes all the wastewater from sampling point 001, sanitary wastewater from the facility's bathrooms, and wastewater from the facility's break room. Sampling point 002 is downstream from sampling point 001. Sampling point 002 is considered the end-of-pipe sampling point.<br><br>Pollutants expected to be present include cadmium, copper, lead, |
| **TOTAL** | | 450 | 160 | |



## D. PROCESS UNIT OPERATION/FLOW INFORMATION

Process wastewater is generated from the mild acid cleaning, polishing, grinding, and electroplating rinses.

The total amount of process wastewater generated from the above operations is 160 gallons per day (gpd), based on 5 operational days per week.

| PERMIT NUMBER | SAMPLING POINT | PROCESS UNIT OPERATION CODE | PROCESS DESCRIPTION |
|---|---|---|---|
| [**Number**] | 001 | Gold rinse bath | Continuous overflow gold rinse bath (about 90 gpd) |
| | 001 | Silver rinse | Single hot tap rinse (about 60 gpd) |
| | 001 | Prep cleaning | All prep-cleaning wastewaters from the cleaning, polishing, and grinding are captured in a 10-gallon container. The container is discharged to the wastewater system at the end of each day. |

## E. DILUTION/AUXILIARY OPERATION/FLOW INFORMATION

No dilution wastestreams combine with process wastewater before or at sampling point 001.

## F. FLOW-MEASURING DEVICE

[**Name of facility**] has installed a parshall flume and an ultrasonic flow transmitter to monitor the wastewater flow discharged to the sewer system.

## G. PRETREATMENT UNIT OPERATIONS

All the silver rinse wastewater is first pretreated using silver recovery canister systems (two canisters in series). The effluent from the silver canisters is then discharged into a holding tank (#1 tank) along with the gold rinse wastewater and prep-cleaning wastewaters. All the wastewater in the holding tank is treated in a batch process. The pH is measured, and then soda ash is added manually until the pH is around 10 standard units, at which point a flocculent is added to promote settling. The wastewater is allowed to settle, and then the treated effluent is siphoned into another holding tank (#2 tank). The pH is adjusted by adding hydrochloric acid until it is about 6.5–7.5 standard units. Once the pH is lowered to the desired level, the treated effluent is discharged to the POTW. This treatment is a batch process, and the facility typically discharges two batches per workweek.

The solids from #1 tank are sent to a filter press. The liquid from the filter press is sent back to #1 tank, and the filter cake is sent off-site for disposal or recycling.

## H. POLLUTION PREVENTION/BEST MANAGEMENT PRACTICES

[**Name of facility**] has implemented the following pollution prevention practice(s) and/or best management practice(s):

The facility has installed two silver recovery canisters in series to pretreat silver-laden waste before it is discharged to the wastewater treatment system. The exhausted or used canisters are sent off-site for processing.

In addition, the facility has changed its silver rinse procedures from a continuous overflow rinse to a single- pass rinse that is in operation only when silver plating rinsing is needed.

## I. RATIONALE FOR MONITORING LOCATIONS/SAMPLING POINTS

Two sets of concentration-based limits apply to this facility's discharge to the [**name of Control Authority**] sewerage system: categorical Pretreatment Standards and the [**name of Control Authority**]'s local limits. Sampling point 001 is at the end of the regulated process. Therefore, it qualifies as a representative point to determine compliance with applicable federal Pretreatment Standards.

[**Name of facility**] also has a second sampling point, sampling point 002, which is at the end of the pipe before discharge to the POTW sewer (a different location from sampling point 001). Therefore, sampling point 002 qualifies as a point to determine compliance with the [**name of Control Authority**]'s local limits.

## J. RATIONALE FOR MONITORING FREQUENCY REQUIREMENTS

***Rationale for Reduced Monitoring***

According to 40 CFR 403.12(e)(3) and the [***n*ame of Control Authority**]'s sewer use ordinance section [**SUO section number**], the [**name of Control Authority**] may reduce [**name of facility**]'s self-monitoring requirement to once a year (unless required more frequently in the Pretreatment Standard or by the Approval Authority). Reduced monitoring for cadmium, copper, nickel, and silver is not granted because of the basis materials used in the plating process and plating solutions. The POTW has approved the permittee's request for reduced lead monitoring. Lead is not expected to be present, even though there were instances of minor lead excursions. Such minor lead excursions did not cause the permittee to be in significant noncompliance with the categorical Pretreatment Standards for lead.

[**Name of facility**]'s categorical wastewater flow does not exceed any of the following: 5,000

gpd, as measured by a continuous effluent flow monitoring device

20.85 pounds per day of biochemical oxygen demand (BOD) and 20.85 pounds per day of total suspended solids (TSS)

0.015 pounds per day of lead

Currently, [**name of facility**]'s categorical wastewater flow is at 160 gpd, and the organic loading from the facility's categorical wastewater is 0.024 pound per day of BOD (average BOD concentration at sampling point 001 is 15 mg/L) and 0.0168 pound per day of TSS (average TSS concentration at sampling point 001 is 30 mg/L**).** Furthermore (as shown in the table below, comparing the facility's lead loading with the maximum allowable headworks loading (MAHL) for pollutants with local limits), the facility's loadings is less than 0.01 percent of the MAHLs for any pollutant regulated by the applicable categorical Pretreatment

Standard for which approved local limits were developed. Therefore, the facility is granted reduced monitoring requirements for lead to once per calendar year.

| Pollutant name | Facility loading value (lb/day) | Maximum allowable headworks loading (MAHL) (lb/day) | 0.01 Percent of MAHL (lb/day) |
|---|---|---|---|
| Lead | 0.00053 | 1.5 | 0.015 |

In addition, [**name of facility**] has not been in significant noncompliance, as defined at 40 CFR 403.8(f)(2)(viii), for any time in the past 2 years. Nor does [**name of facility**] have daily flow rates, production levels, and pollutant levels that vary so significantly that decreasing the reporting requirement for the facility would result in data that are not representative of conditions occurring during the report period.

**Rationale for Any Monitoring Waivers**

According to 40 CFR 403.12(e)(2) and the [**name of Control Authority**]'s sewer use ordinance section [**SUO section number**], the [**name of Control Authority**] may authorize [**name of facility**] to forego sampling of a pollutant regulated by a categorical Pretreatment Standard if [**name of facility**] has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without increase in the pollutant due to activities at [**name of facility**].

[**Name of facility**] has demonstrated that chromium and cyanide is neither present nor expected to be present by the previous periodic compliance reports (from January 2005 through July 2008), a certification statement from the facility indicating that there are no chromium- or cyanide-laden plating solutions on-site, and copies of raw material order invoices (from January 2005 through July 2008).

Therefore, the [**name of Control Authority**] is granting a monitoring waiver for chromium and cyanide in permit [**permit number**] issued on [**Issuance Date**]. This monitoring waiver is valid only for the term of this permit. [**Name of facility**] is required to submit a new request for any monitoring waivers for subsequent permits.

***Rationale for TTO Monitoring Waiver***

[**Name of facility**] has an approved Toxic Organic Management Plan (TOMP). Therefore, TTO monitoring is not necessary unless the facility fails to submit its certified TTO statement at a frequency of once every 6 months.

## K. RATIONALE FOR REPORTING REQUIREMENTS

***TTO Certification Requirements***

[**Name of facility**] has an approved TOMP. Therefore, [**name of facility**] must submit the TTO certification statement at 40 CFR 433.12 at a frequency of once every 6 months.

***Signatory Requirements***

According to 40 CFR 403.12(l), periodic compliance reports must be signed by an authorized facility representative. [**Name of facility**] has designated the following person(s) as authorized facility representative(s).

| Name | Title |
|---|---|
| [**Name**] | [**Title**] |

***Reduced Monitoring Reporting Requirements***

According to 40 CFR 403.12(e)(3) and the [**Name of Control Authority**]'s sewer use ordinance section [**SUO section number**], the [n**ame of Control Authority**] has reduced [**name of facility**]'s self-monitoring requirement for lead to once a year. Therefore, [**name of facility**] must notify the [**name of Control Authority**] if the permittee's categorical wastewater flow exceeds any of the following conditions:

1. 5,000 gpd, as measured by a continuous effluent flow monitoring device
2. 20.85 pounds per day of BOD or 20.85 pounds of TSS
3. 0.015 pound per day of lead

***Monitoring Waiver Reporting Requirements***

According to 40 CFR 403.12(e)(2) and the [**name of Control Authority**]'s sewer use ordinance section [**SUO section number**], the [**name of Control Authority**] has authorized [**name of facility**] to forego sampling of chromium and cyanide regulated by a categorical Pretreatment Standard. Therefore, [**name of facility**] must submit, once every 6 months, the certification at 40 CFR 403.12(e)(2)(v).

In addition, if a waived pollutant is found to be present or is expected to be present because of changes that occur in [**name of facility**]'s operations, [**name of facility**] must immediately notify the [**name of Control Authority**].

## L. RATIONALE FOR SPECIAL CONDITIONS

Not applicable.

## M. RATIONALE FOR EFFLUENT LIMITATIONS

[**Name of facility**] is engaged primarily in specialty precious metal plating (silver and gold), NAICS Code 332813. The core operation(s) performed at the facility are gold and silver electroplating. Ancillary operations include cleaning, grinding, polishing, and tumbling.

New sources are facilities that started operations after the August 31, 1982, publication date of the proposed Metal Finishing Point Source Category. Job shops are facilities that own 50 percent or less of the materials undergoing metal finishing. [**Name of facility**] started operations October 15, 1985. [**Name of facility**] owns less than 50 percent of the materials that undergo metal finishing. Therefore, [**name of facility**] qualifies as a new source job shop metal finisher subject to the federal categorical Pretreatment Standards set at 40 CFR Part 433, Subpart A (Metal Finishing – Pretreatment Standard for New Sources).

According to 40 CFR 403.6(e), the combined wastestream formula (CWF) is applicable where a regulated wastestream combines with one or more unregulated or dilute wastestreams. [**Name of facility**] has no dilution wastestreams or other regulated wastestreams that combine with the process wastewater. Therefore, use of the CWF is not required.

According to 40 CFR 433.12(a), facilities subject to the Metal Finishing Regulations must analyze for reasonably expected toxic organics or submit a TOMP certification in lieu of monitoring. The list of expected toxic organics is as follows:

Naphthalene
Ethylbenzene

This determination of reasonably expected toxic organics is based on the evaluation of POTW and periodic compliance sampling data reported between October 1985 and January 2008.

[**Name of facility**] has submitted a TOMP for review which the [**name of Control Authority**] has approved. The TOMP satisfies the above requirement and [**name of facility**] will be exempt from monitoring total toxic organics.

According to 40 CFR 433.12(a), facilities subject to the Metal Finishing Regulations must analyze for reasonably expected toxic organics or submit a TOMP certification in lieu of monitoring. On January 15, 2008, [**name of facility**] submitted a TOMP for the [**name of Control Authority**]'s approval. Upon review and evaluation, the TOMP was approved on March 1, 2008. Pursuant to this approval, [**name of facility**] is exempt from toxic organics monitoring. [**Name of facility**] must submit a TOMP certification statement at least once every 6 months.

## N. EXAMPLE CALCULATIONS

Not applicable.

## O. SLUG DISCHARGE EVALUATION

[**Name of POTW**] conducted a slug discharge evaluation of [**name of facility**] on November 20, 1985; September 3, 1987; July 27, 1989; December 13, 1990; April 6, 1992; March 30, 1994; January 24, 1996; August 15, 1997; August 14, 1999; June 1, 2001; and May 31, 2003.

The [**name of POTW**] has determined that [**name of facility**] is required to develop and implement a slug discharge control plan.

Prepared by:_____Date:_____

Reviewed by:_____Date:_____