STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Vincent Christian)
MEETING DATE: November 9, 2016

ITEM: **6A**

SUBJECT: **USS-POSCO Industries, Pittsburg Plant, Pittsburg, Contra Costa County** — Reissuance of NPDES Permit

CHRONOLOGY: July 2011 – NPDES Permit reissued

DISCUSSION: This Tentative Order (Appendix A) would reissue the NPDES permit for USS-POSCO Industries (UPI), which owns and operates a 420-acre steel finishing plant on the Pittsburg waterfront. The plant finishes about one million tons of hot-rolled steel per year but does not manufacture steel from raw materials. Its wastewater treatment plant treats about 4.8 million gallons per day of industrial wastewater for discharge to New York Slough. Most stormwater onsite is routed to the treatment plant, but UPI also discharges some stormwater from paved areas to New York Slough. The Tentative Order updates prohibitions, effluent limits (e.g., chronic toxicity limits), and provisions to regulate these discharges.

We received comments (Appendix B) from UPI on the draft permit distributed for review. We responded to UPI's comments (Appendix C) but did not find reason to revise the Tentative Order, past making some minor editorial and formatting changes. We expect this item to remain uncontested.

RECOMMEN-DATION: Adoption of the Tentative Order

FILE: CW-269601

Appendices:
A. Tentative Order
B. Comments
C. Response to Comments

APPENDIX A

TENTATIVE ORDER No. R2-2016-00XX
NPDES No. CA0005002

The following discharger is subject to waste discharge requirements (WDRs) set forth in this Order.

Table 1. Discharger Information

Discharger	USS-POSCO Industries
Facility Name	Pittsburg Plant
Facility Address	900 Loveridge Road Pittsburg, CA 94565 Contra Costa County
CIWQS Place Number	269601

Table 2. Discharge Locations

Discharge Point	Effluent Description	Latitude	Longitude	Receiving Water
001	Industrial Wastewater Cooling Water Stormwater	38.030000	121.86444	New York Slough
002	Stormwater	38.030833	121.86611	New York Slough

Table 3. Administrative Information

This Order was adopted on:	<DATE>
This Order shall become effective on:	January 1, 2017
This Order shall expire on:	December 31, 2021
CIWQS Regulatory Measure Number	<TBD>
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with California Code of Regulations, title 23, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	April 1, 2021
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, San Francisco Bay Region, have classified this discharge as follows:	Major

I, Bruce H. Wolfe, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on the date indicated above.

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Bruce H. Wolfe**,** Executive Officer

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Tables

Attachments

I. FACILITY INFORMATION

Information describing the USS-POSCO Industries wastewater treatment plant (Facility) is summarized in Table 1 and in Fact Sheet (Attachment F) sections I and II.

II. FINDINGS

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board), finds:

A. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters.

B. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information the Discharger submitted as part of its application, information obtained through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F) contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through E, and G are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. No provisions or requirements in this Order are included to implement State law only.

D. Notification of Interested Parties. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe these WDRs and provided an opportunity to submit written comments and recommendations. The Fact Sheet provides details regarding the notification.

E. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. The Fact Sheet provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2011-0048 (previous order) is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions of Water Code division 7 (commencing with § 13000) and regulations adopted thereunder and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous order.

III. DISCHARGE PROHIBITIONS

A. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.

B. The bypass of untreated or partially-treated wastewater to waters of the United States is prohibited, except as provided for in Attachment D sections I.G.2 and I.G.3.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Discharge Point No. 001

1. **Effluent Limits.** The Discharger shall comply with the following effluent limits at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP:

Table 4. Effluent Limits

Parameter	Units	Monthly Average	Maximum daily
Total Suspended Solids	lbs/day	1100	2600
	mg/L	31	60
Oil and Grease	lbs/day	250	720
	mg/L	10	20
Lead, Total	lbs/day	3.9	12
	µg/L	430	690
Zinc, Total	lbs/day	4.6	14
	µg/L	1500	2600
Naphthalene	lbs/day	---	0.68
Tetrachloroethylene	lbs/day	---	1.0
Copper, Total	µg/L	3.3 [1]	5.5 [1]
Cyanide	µg/L	6.8	14
Nickel, Total	µg/L	7.3	12
Chromium, Total	µg/L	1700	2800
Silver, Total	µg/L	240	430
Cadmium, Total	µg/L	260	690
Dioxin-TEQ	µg/L	1.3E-08	2.6E-08
Carbon tetrachloride	µg/L	0.25	0.50
Pentachlorophenol	µg/L	0.28	0.56
3,3-Dichlorobenzidine	µg/L	0.04	0.08
Total Toxic Organics [2]	µg/L	---	2100
Chronic Toxicity	TUc	3.3	6.6

Unit Abbreviations:
lbs/day = pounds per day
mg/L = milligram per liter
µg/L = micrograms per liter
TUc = chronic toxicity units

Footnotes:
[1] These copper limits only apply if and when a sample is also greater than 16 µg/L. Concentrations greater than 16 µg/L are statistically greater than the intake copper concentration.
[2] Total toxic organics are listed in 40 C.F.R. section 433.11.

2. **pH Limit.** The pH of the discharge at EFF-001 shall not be less than 6.5 standard units or greater than 8.5 standard units at any point in time. If the Discharger monitors pH continuously, pursuant to 40 C.F.R. section 401.17 the Discharger shall be in compliance with this pH limitation provided that both of the following conditions are satisfied: (i) the total time during which the pH is outside the required range shall not exceed 7 hours and 26 minutes in any calendar month, and (ii) no individual excursion from the required pH range shall exceed 60 minutes.

3. **Acute Toxicity.** Discharges at Discharge Point No. 001 (Monitoring Location EFF-001) shall meet the following acute toxicity limitations:

a. An 11-sample median value of not less than 90 percent survival; and

b. An 11-sample 90 percentile value of not less than 70 percent survival.

These acute toxicity limitations are defined as follows:

- **11-sample median.** A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit if five or more of the past ten bioassay tests also show less than 90 percent survival.

- **11-sample 90 percentile.** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit if one or more of the past ten bioassay tests also show less than 70 percent survival.

4. Temperature. Discharges at Discharge Point No. 001 shall not exceed 92ºF.

B. Discharge Point No. 002

In accordance with Provision VI.C.4, the Discharger shall implement Best Management Practices (BMPs) as part of a Stormwater Pollution Prevention Plan to control its discharges as necessary to meet applicable water quality standards. BMPs shall reflect best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to reduce or prevent discharges of pollutants in a manner that reflects best industry practice considering technological availability and economic practicability and achievability.

V. RECEIVING WATER LIMITATIONS

A. Discharges at Discharge Point Nos. 001 and 002 shall not cause the following conditions to exist in receiving waters at any place:

1. Floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses;

2. Alteration of suspended sediment in such a manner as to cause nuisance or adversely affect beneficial uses or detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life;

3. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses;

4. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

5. Alteration of temperature beyond present natural background levels;

6. Changes in turbidity that cause nuisance or adversely affect beneficial uses or increases from normal background light penetration or turbidity greater than 10 percent in areas where natural turbidity is greater than 50 nephelometric turbidity units;

7. Coloration that causes nuisance or adversely affects beneficial uses;

8. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or

9. Toxic or other deleterious substances in concentrations or quantities that cause deleterious effects on wildlife, waterfowl, or other aquatic biota or render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

B. The discharge shall not cause the following limits to be exceeded in receiving waters at any place within one foot of the water surface:

1.	Dissolved Oxygen	5.0 mg/L, minimum The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
2.	Dissolved Sulfide	Natural background levels
3.	pH	The pH shall not be depressed below 6.5 or raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
4.	Nutrients	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

C. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Resources Control Board (State Water Board) as required by the CWA and regulations adopted thereunder. If more stringent water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with the more stringent standards.

VI. PROVISIONS

A. Standard Provisions

1. The Discharger shall comply with all "Standard Provisions" in Attachment D.

2. The Discharger shall comply with all applicable provisions of the "Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Wastewater Discharge Permits" (Attachment G).

B. Monitoring and Reporting

The Discharger shall comply with the Monitoring and Reporting Program (MRP, Attachment E) and future revisions thereto, and applicable sampling and reporting requirements in Attachments D and G.

C. Special Provisions

1. Reopener Provisions

The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law:

a. If present or future investigations demonstrate that the discharges governed by this Order have or will have a reasonable potential to cause or contribute to, or will cease to have, adverse impacts on water quality or beneficial uses of the receiving waters;

b. If new or revised water quality objectives or total maximum daily loads (TMDLs) come into effect for San Francisco Bay or contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality objectives and wasteload allocations in the TMDLs. Adoption of the effluent limitations in this Order is not intended to restrict in any way future modifications based on legally-adopted water quality objectives or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications;

c. If translator, dilution, or other water quality studies provide a basis for determining that a permit condition should be modified;

d. If State Water Board precedential decisions, new policies, new laws, or new regulations are adopted;

e. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to this discharge; or

f. As otherwise authorized by law.

The Discharger may request a permit modification based on any of the circumstances above. With any such request, the Discharger shall include antidegradation and anti-backsliding analyses.

2. Effluent Characterization Study and Report

a. Study Elements. The Discharger shall continue to characterize and evaluate the discharge to verify that the "no" or "unknown" reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. The Discharger shall collect representative samples at as set forth below:

Discharge Point	Monitoring Location	Frequency
001	EFF-001	1/year
002	EFF-002	Once

The samples shall be analyzed for the pollutants listed in Attachment G, Table C, except for those pollutants with effluent limitations where the MRP already requires more frequent monitoring and except for those pollutants for which there are no water quality

criteria (see Fact Sheet Table F-7). Compliance with these requirements shall be achieved in accordance with the specifications of Attachment G sections III.A.1 and III.A.2.

The Discharger shall evaluate on an annual basis if concentrations of any of these pollutants significantly increase over past performance. The Discharger shall investigate the cause of any such increase. The investigation may include, but need not be limited to, an increase in monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. The Discharger shall establish remedial measures addressing any increase resulting in reasonable potential to cause or contribute to an excursion above applicable water quality objectives. This requirement may be satisfied through identification of the constituent as a "pollutant of concern" in the Discharger's Pollutant Minimization Program, described in Provision VI.C.3.

b. Reporting Requirements

i. Routine Reporting. The Discharger shall, within 45 days of receipt of analytical results, report the following in the transmittal letter for the appropriate self-monitoring report:

(a) Indication that a sample for this characterization study was collected; and

(b) Identity of pollutants detected at or above applicable water quality criteria (see Fact Sheet Table F-8 for the criteria) and the detected concentrations of those pollutants.

ii. Annual Reporting. The Discharger shall summarize the annual data evaluation and source investigation in the annual self-monitoring report.

iii. Final Report. The Discharger shall submit a final report that presents all these data with the application for permit reissuance.

3. Pollutant Minimization Program

a. The Discharger shall refine its Pollutant Minimization Program as further described below when there is evidence that a priority pollutant is present in the effluent above an effluent limitation (e.g., sample results reported as detected but not quantified [DNQ] when the effluent limitation is less than the method detection limit [MDL], sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, or results of benthic or aquatic organism tissue sampling) and either:

i. A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or

ii. A sample result is reported as not detected (ND) and the effluent limitation is less than the MDL, using definitions in Attachment A and reporting protocols described in the MRP.

b. If triggered by the reasons set forth in Provision VI.C.3.c, above, the Discharger's Pollutant Minimization Program shall be modified to include the following actions and submittals:

i. Annual review and semi-annual monitoring of potential sources of the reportable priority pollutants, which may include fish tissue monitoring and other bio-uptake sampling or alternative measures when source monitoring is unlikely to produce useful analytical data;

ii. Quarterly monitoring for the reportable priority pollutants in the influent to the Facility. The Executive Officer may approve alternative measures when influent monitoring is unlikely to produce useful analytical data;

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutants in the effluent at or below the effluent limitation;

iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutants, consistent with the control strategy; and

v. Inclusion of the following specific items within the annual report required by Provision VI.C.3.b above:

(a) All Pollutant Minimization Program monitoring results for the previous year;
(b) List of potential sources of the reportable priority pollutants;
(c) Summary of all actions undertaken pursuant to the control strategy; and
(d) Description of actions to be taken in the following year.

4. Stormwater Management

The Discharger shall manage stormwater discharges from Discharge Point No. 002 as follows:

a. Stormwater Pollution Prevention Plan. The Discharger shall review its Stormwater Pollution Prevention Plan by August 31 each year and revise it if necessary. This plan shall contain all elements described in Regional Standard Provisions (Attachment D) section I.J and incorporate relevant elements of *General Permit for Stormwater Discharges Associated with Industrial Activities*, NPDES General Permit No. CAS000001 (State Water Board Order No. 2014-0057-DWQ), sections X, XI, and XV. The Discharger shall submit an updated plan by February 1 each year if there is a change in operations that could affect stormwater quality. If there are no changes to the plan, the annual update may be a statement in the annual report (see MRP section VII.B.2.b, Attachment E) indicating that the plan is unchanged.

b. Annual Stormwater Report. The Discharger shall submit an Annual Stormwater Report by July 1 each year providing data for the previous wet weather season. The Annual Stormwater Report shall, at a minimum, include the following:

i. Tabulated summary of all monitoring results (see Provision VI.C.2 and MRP section IV.B) and visual observations taken during inspections;

ii. Discussion of source identification and control programs; and

iii. Discussion of corrective actions taken or planned, including but not limited to a summary of BMP changes implemented during the previous year and changes planned for the following year.

c. Additional Stormwater Provisions

i. Upon detection of a pollutant at Discharge Point No. 002 in excess of an action level below, the Discharger shall review its Stormwater Pollution Prevention Plan to identify modifications to its existing BMPs or additional BMPs as necessary to reduce pollutant discharge concentrations to levels below these action levels. The Discharger shall revise the Stormwater Pollution Prevention Plan accordingly before the next storm, if possible, or as soon as practical, and in no event later than three months following the exceedance.

Table 5. Stormwater Action Levels

Parameter	Unit	Annual	Instantaneous Maximum
pH	Standard Units	---	6.5-8.5 [1]
TSS	mg/L	100	400
Oil and Grease	mg/L	15	25
Aluminum	mg/L	---	0.75
Zinc	mg/L	---	0.26

Unit Abbreviations:
mg/L = milligrams per liter
Footnote:
[1] Values above or below this range require further action.

ii. Within 105 days of receiving any results that exceed the action levels above, the Discharger shall report the results in a self-monitoring report, along with a detailed report regarding its compliance with Provision VI.C.4.c.i, above, and Provision VI.C.4.c.iii, below.

iii. If the Discharger continues to detect a pollutant in excess of the action levels above, the Discharger shall continue to review the selection, design, installation, and implementation of its BMPs to identify modifications necessary to reduce pollutant discharge concentrations to levels below these action levels.

iv. The Discharger may determine that no further pollutant reduction measures are technologically available and economically practicable in light of best industry practices. In this case, the Discharger shall document its rationale for this conclusion in a technical report that contains the following:

(a) Evaluation of any additional BMPs that would reduce or prevent exceedances of the action levels;

(b) Estimated costs of the additional BMPs;

(c) Basis for choosing the implemented BMPs and not the additional BMPs identified;

(d) Demonstration that additional BMPs are not technologically available or economically practicable; or

(e) Documentation that action level exceedances are caused solely by uncontrollable or natural sources.

The Discharger may cease efforts to enhance its BMPs after submitting this technical report and obtaining the written concurrence of the Executive Officer that no further pollutant reduction measures are technically available and economically practicable in light of best industry practices.

5. Thermal Discharge Reduction Evaluation Report

By December 1, 2017, the Discharger shall submit a report that evaluates the feasibility of reducing its thermal discharges, with the goal of 86º F degrees or less. The Discharger shall also investigate the feasibility of reducing thermal discharges seasonally to temperatures protective of delta smelt during recruitment and spawning. The report shall consider available alternatives (including but not limited to "no action" and eliminating discharge) and their feasibility, effectiveness, and cost. The report shall consider the factors listed in 40 C.F.R. section 125.3(d). The Discharger shall send a copy of the report to the California Department of Fish and Wildlife and the National Marine Fisheries Service.

6. Copper Action Plan

The Discharger shall implement source control and pollution prevention for copper in accordance with the following tasks and time schedule:

Table 6. Copper Action Plan

Task	Compliance Date
1. Implement Copper Control Program The Discharger shall review its Copper Control Program on an annual basis and implement it continuously. The Discharger shall update its Copper Control Program as necessary and report all actions and changes in the annual pollution prevention report.	Implementation shall be ongoing.
2. Implement Additional Actions If the Regional Water Board notifies the Discharger that the three-year rolling mean dissolved copper concentration in Suisun Bay exceeds 2.8 µg/L, then within 90 days of the notification, evaluate the effluent copper concentration trend and, if it is increasing, develop and begin implementation of additional measures to control copper discharges. Report the conclusion of the trend analysis and provide a schedule for any new actions to be taken within the next 12 months.	With next annual pollution prevention report due February 1 (at least 90 days following notification)
3. Report Status Submit an annual report documenting copper control program implementation that evaluates the effectiveness of the actions taken, including any additional actions required above, and provides a schedule for actions to be taken within the next 12 months.	With annual pollution prevention report due February 1 each year

7. Cyanide Action Plan

The Discharger shall implement monitoring and surveillance, source control, and pollution prevention for cyanide in accordance with the following tasks and time schedule:

Table 7. Cyanide Action Plan

Task	Compliance Date
1. Implement Cyanide Control Program The Discharger shall continue to minimize cyanide sources, as identified in its February 26, 2013, Cyanide Control Plan. The Discharger shall review its Cyanide Control Program annually and report any updates in the annual pollution prevention report.	Implementation shall be ongoing.
2. Implement Additional Measures If the Regional Water Board notifies the Discharger that ambient monitoring shows cyanide concentrations are 1.0 µg/L or higher in the main body of San Francisco Bay, then within 90 days of the notification, commence actions to identify and abate cyanide sources responsible for the elevated ambient concentrations, report on the progress and effectiveness of the actions taken, and provide a schedule for actions to be taken within the next 12 months.	With next annual pollution prevention report due February 1 each year (at least 90 days following notification)
3. Report Status of Cyanide Control Program Submit an annual report documenting cyanide control program implementation and addressing the effectiveness of actions taken, including any additional cyanide controls required above, and provide a schedule for actions to be taken within the next 12 months.	With annual pollution prevention report due February 1 each year

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Known to cause cancer in living organisms.

Coefficient of Variation
Measure of data variability calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit) for a constituent with limitations expressed in units of mass; or (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period is considered the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
Sample result less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
Amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined by conducting a mixing zone study or modeling the discharge and receiving water.

Effluent Concentration Allowance (ECA)
Value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the CV for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (*Technical Support Document For Water Quality-based Toxics Control*, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bay
Indentation along the coast that encloses an area of oceanic water within a distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
Concentration that results from the confirmed detection of the substance below the ML value by the analytical method.

Estuaries
Waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars are considered estuaries. Estuarine waters are considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters include, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
Highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
Lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
Highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
Middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between n/2 and n/2+1).

Method Detection Limit (MDL)
Minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
Concentration at which the entire analytical system gives a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Limited volume of receiving water allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results less than the laboratory's MDL.

Persistent Pollutants
Substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program
Program of waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the Pollutant Minimization Program is to reduce all potential sources of a priority pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. Cost effectiveness may be considered when establishing the requirements of a Pollutant Minimization Program. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), is considered to fulfill Pollutant Minimization Program requirements.

Pollution Prevention
Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board or Regional Water Board.

Reporting Level (RL)
ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from SIP Appendix 4 in accordance with SIP section 2.4.2 or established in accordance with SIP section 2.4.3. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Source of Drinking Water
Any water designated as having a municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)
Measure of variability calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

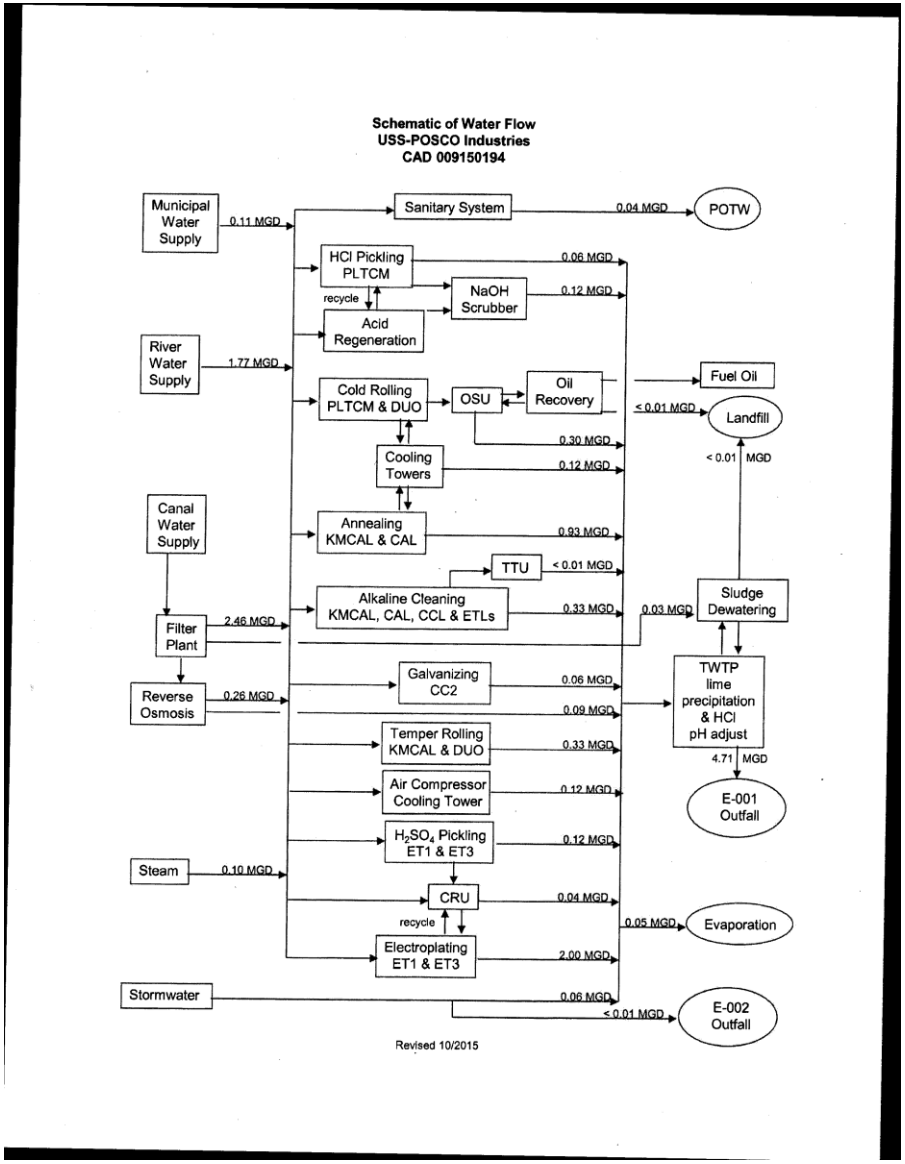
where:

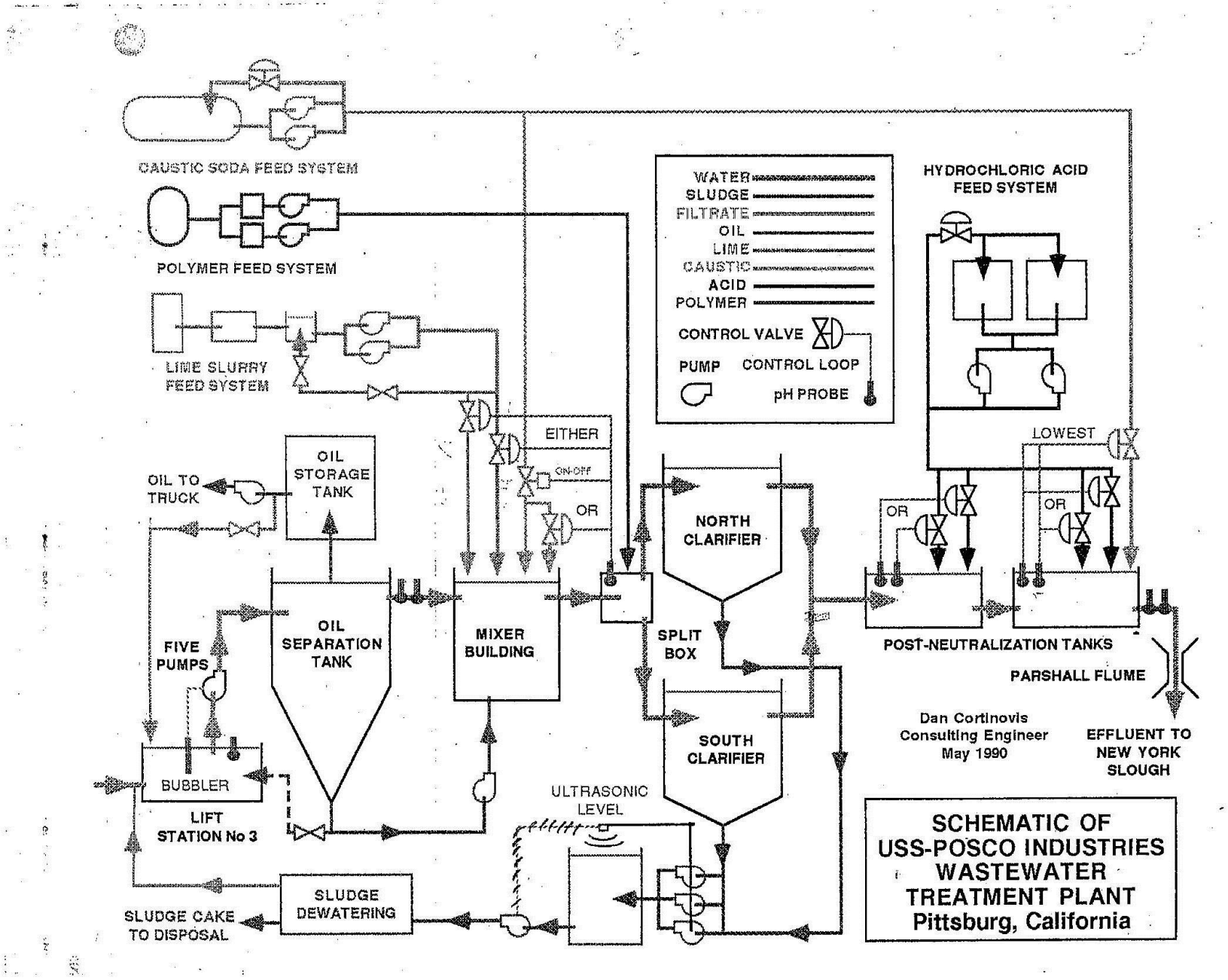
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
Study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. A TIE is a set of procedures to identify the specific chemicals responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

ATTACHMENT B – FACILITY MAP

ATTACHMENT C – PROCESS FLOW DIAGRAM




CAUSTIC SODA FEED SYSTEM
POLYMER FEED SYSTEM
LIME SLURRY FEED SYSTEM
WATER
SLUDGE
FILTRATE
OIL
LIME
CAUSTIC
ACID
POLYMER
CONTROL VALVE
PUMP
CONTROL LOOP
pH PROBE
HYDROCHLORIC ACID FEED SYSTEM
EITHER
ON-OFF
OR
LOWEST
OIL TO TRUCK
OIL STORAGE TANK
NORTH CLARIFIER
OIL SEPARATION TANK
MIXER BUILDING
SPLIT BOX
SOUTH CLARIFIER
FIVE PUMPS
POST-NEUTRALIZATION TANKS
PARSHALL FLUME
Dan Cortinovis
Consulting Engineer
May 1990
EFFLUENT TO NEW YORK SLOUGH
BUBBLER
LIFT STATION No 3
ULTRASONIC LEVEL
SLUDGE DEWATERING
SLUDGE CAKE TO DISPOSAL
SCHEMATIC OF USS-POSCO INDUSTRIES WASTEWATER TREATMENT PLANT
Pittsburg, California

ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants and with standards for sewage sludge use or disposal established under CWA section 405(d) within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2)); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of ensuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of

equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. Approval. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions—Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions—Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

d. The Discharger complied with any remedial measures required under Standard Provisions—Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS—PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS—RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include the following:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) the analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and

2. Permit applications and attachments, permits, and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS—REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions—Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)

2. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. § 122.22(a)(2).)

For a municipality, state, federal, or other public agency, all permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions—Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions—Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions—Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order. (40 C.F.R. § 122.22(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):

a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 C.F.R. section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (Alternatively, for an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a), this notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 C.F.R. section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1).) (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions—Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision—Reporting V.E above. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS—NOTIFICATION LEVELS

A. Publicly Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA sections 301 or 306 if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of this Order. (40 C.F.R. § 122.42(b)(2).)

3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Contents

Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Clean Water Act section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State laws and regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. sections 122.62, 122.63, and 124.5. If any discrepancies exist between this MRP and the "Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits" (Attachment G), this MRP shall prevail.

B. The Discharger shall conduct all monitoring in accordance with Attachment D, section III, as supplemented by Attachment G. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. section 136 and must be specified in this permit.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Locations

Sampling Location Type	Monitoring Location Name	Monitoring Location Description [1]
Influent	INF-001 (formerly INT-001)	Contra Costa Canal Intake – At a point in the intake line to the Facility from the Contra Costa Canal. *Latitude 37.999894, Longitude -121.875985*
Influent	INF-002 (formerly INT-002)	New York Slough Intake – At a point in the intake line to the Facility from New York Slough. *Latitude 38.030577, Longitude -121.865152*
Effluent	EFF-001	At a point in the outfall to New York Slough at which all waste tributary to the outfall is present prior to mixing with the receiving water (Discharge Point 001). *Latitude 38.028461, Longitude -121.861072*
Effluent	EFF-002	At a point in the outfall to New York Slough at which all stormwater to the outfall is present prior to mixing with the receiving water (Discharge Point 002). *Latitude 38.030088, Longitude -121.867892*

Footnote:

[1] Latitudes and longitudes are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor plant influent at Monitoring Location INF-001 and INF-002 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Copper, Total	µg/L	Grab	1/Month
Cyanide, Total	µg/L	Grab	1/Year

Abbreviation:

µg/L = micrograms per liter

Sampling Types and Frequencies:

1/Month = once per month
1/Year = once per year

IV. EFFLUENT MONITORING REQUIREMENTS

A. Treated Wastewater

The Discharger shall monitor plant effluent at Monitoring Location EFF-001 as follows:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow [1]	MGD	Continuous	Continuous/D
Total Suspended Solids (TSS)	mg/L	C-24	1/Month
Oil and Grease [2]	mg/L	Grab	1/Quarter
pH [3]	standard units	Continuous	Continuous/D
Temperature [4]	ºF	Continuous	Continuous/D
Acute Toxicity [5]	% survival	C-24	1/2 Weeks
Chronic Toxicity [6]	TU_c	C-24	1/Quarter
Copper, Total	µg/L	C-24	1/Month
Cyanide, Total	µg/L	Grab	1/Quarter
Nickel, Total	µg/L	C-24	1/Month
Carbon tetrachloride	µg/L	Grab	2/Year
Pentachlorophenol	µg/L	Grab	2/Year
3,3-Dichlorobenzidine	µg/L	Grab	2/Year
Dioxin-TEQ	µg/L	Grab	1/Year
Lead, Total	µg/L	C-24	1/Year
Zinc, Total	µg/L	C-24	1/Year
Cadmium, Total	µg/L	C-24	1/Year
Chromium, Total	µg/L	C-24	1/Year
Silver, Total	µg/L	C-24	1/Year
Naphthalene	µg/L	Grab	1/Year
Tetrachloroethylene	µg/L	Grab	1/Year
Total Toxic Organics [7]	µg/L	Grab	1/Year

Unit Abbreviations:

MGD = million gallons per day
mg/L = milligrams per liter
µg/L = micrograms per liter
ºF = degrees Fahrenheit
% survival = percent survival
TU_c = chronic toxicity units

Sampling Types and Frequencies:

C-24 = 24 hour composite
Grab = grab sample
Continuous = measured continuously
Continuous/D = measured continuously, and recorded and reported daily
1/Week = once per week
1/2 Weeks = once every two weeks
1/Month = once per month
1/Quarter = once per quarter
1/Year = once per year
2/Year = twice per year

Footnotes:

[1] The daily average flow for each day shall be reported in monthly self-monitoring reports.

[2] Oil and grease sampling and analysis shall be conducted in accordance with U.S. EPA Method 1664A.

[3] The minimum and maximum pH for each day shall be reported in self-monitoring reports.

[4] The maximum temperature for each day shall be reported in self-monitoring reports.

[5] Acute bioassay tests shall be performed in accordance with MRP section V.A.

[6] Chronic bioassay tests shall be performed in accordance with MRP section V.B.

[7] Pollutants to be included within total toxic organics are listed in 40 C.F.R. section 433.11.

B. Stormwater

The Discharger shall monitor stormwater at Monitoring Location EFF-002 as follows:

Table E-4. Stormwater Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Volume [1]	MG	Estimate	1/Day [2]
pH	Standard units	Grab	1/Day [2]
Total Suspended Solids (TSS)	mg/L	Grab	1/Day [2]
Oil and Grease [3]	mg/L	Grab	1/Day [2]
Aluminum	mg/L	Grab	1/Day [2]
Zinc	mg/L	Grab	1/Day [2]

Unit Abbreviations:

MG = million gallons
mg/L = milligrams per liter

Sampling Types and Frequencies:

Grab = grab sample

Footnotes:

[1] The Discharger shall estimate the volume of water discharged and described how it arrived at the estimate in the self-monitoring report.

[2] The Discharger shall sample significant stormwater discharges (continuous discharges for a minimum of one hour, or an intermittent discharge for a minimum of three hours over a 12 hour period) once per day for at least one storm event per calendar month.

[3] Oil and grease sampling and analysis shall be conducted in accordance with U.S. EPA Method 1664A.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Whole Effluent Acute Toxicity

1. Compliance with the acute toxicity effluent limitations shall be evaluated at Monitoring Location EFF-001 by measuring survival of test organisms exposed to 96-hour continuous flow-through bioassays.

2. Test organisms shall be rainbow trout (*Oncorhynchus mykiss)*. Alternatively, the Executive Officer may specify a more sensitive organism or, if testing a particular organism proves unworkable, the most sensitive organism available.

3. All bioassays shall be performed according to the most up-to-date protocols in 40 C.F.R. part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, 5th Edition (EPA-821-R-02-012). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's request with justification.

4. If the Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment. The Discharger may manually adjust the pH of whole effluent acute toxicity samples prior to performing bioassays to minimize ammonia toxicity interference.

5. Bioassay water monitoring shall include, on a daily basis, pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms is less than 70 percent), the Discharger shall initiate a new test as soon as practical and shall investigate the cause of the mortalities and report its findings in the next self-monitoring report. The Discharger shall repeat the test until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

B. Whole Effluent Chronic Toxicity

1. Monitoring Requirements

a. Sampling. The Discharger shall collect 24-hour composite effluent samples at Monitoring Location EFF-001 for critical life stage toxicity tests as indicated below. For toxicity tests requiring renewals, the Discharger shall collect 24-hour composite samples on consecutive or alternating days.

b. Test Species. The test species shall be red abalone *(Haliotis rufescens)*, unless a more sensitive species is identified. If using this species proves unworkable, the Executive Officer may specify a different species in writing upon the Discharger's request with justification.

The Discharger shall conduct a screening chronic toxicity test as described in Appendix E-1, or as described in applicable State Water Board plan provisions that become effective after adoption of this Order, following any significant change in the nature of the effluent. If there is no significant change in the nature of the effluent, the Discharger shall conduct a screening test and submit the results with its application for permit reissuance. Upon completion of the chronic toxicity screening, the Discharger shall use the most sensitive species to conduct subsequent monitoring.

c. Frequency. Chronic toxicity monitoring shall be as specified below:

i. The Discharger shall monitor routinely once per quarter.

ii. The Discharger shall accelerate monitoring to monthly after either exceeding a monthly average of 3.3 chronic toxicity units (TU_c) or a daily maximum of 6.6 TU_c. Based on the TU_c results, the Executive Officer may specify a different frequency for accelerated monitoring to ensure that accelerated monitoring provides useful information.

iii. The Discharger shall return to routine monitoring if accelerated monitoring does not exceed the trigger in ii, above.

iv. If accelerated monitoring confirms consistent toxicity in excess of the trigger in ii, above, the Discharger shall continue accelerated monitoring and initiate toxicity reduction evaluation (TRE) procedures in accordance with section V.B.3, below.

v. The Discharger shall return to routine monitoring after implementing appropriate elements of the TRE, and either the toxicity drops below the trigger in ii, above, or, based on the TRE results, the Executive Officer determines that accelerated monitoring would no longer provide useful information.

Monitoring conducted pursuant to a TRE shall satisfy the requirements for routine and accelerated monitoring while the TRE is underway.

d. Methodology. Sample collection, handling, and preservation shall be in accordance with U.S. EPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-2. These are *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, currently first edition (EPA/600/R-95-136), *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, currently third edition (EPA-821-R-02-014) and *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, currently fourth edition (EPA-821-R2-02-013). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's

request with justification. If the Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the chronic toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment.

e. Dilution Series. The Discharger shall conduct tests at 100%, 50%, 25%, 10%, and 5%. The "%" represents percent effluent as discharged. Test sample pH may be controlled to the level of the effluent sample as received prior to being salted up.

2. Reporting Requirements

a. The Discharger shall provide toxicity test results with self-monitoring reports and shall include the following, at a minimum, for each test:

i. Sample date

ii. Test initiation date

iii. Test species

iv. End point values for each dilution (e.g., number of young, growth rate, percent survival)

v. No Observable Effect Level (NOEL) values in percent effluent. The NOEL shall equal the IC_{25} or EC_{25} (see MRP Appendix E-1). If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall equal to the No Observable Effect Concentration (NOEC) derived using hypothesis testing. The NOEC is the maximum percent effluent concentration that causes no observable effect on test organisms based on a critical life stage toxicity test.

vi. IC_{15}, IC_{25}, IC_{40}, and IC_{50} values (or EC_{15}, EC_{25}, EC_{40}, and EC_{50}) as percent effluent

vii. TU_c values (100/NOEL, where NOEL = IC_{25}, EC_{25}, or NOEC)

viii. Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)

ix. IC_{50} or EC_{50} values for reference toxicant tests

x. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, and ammonia)

b. The Discharger shall provide the results of the most recent three chronic toxicity tests and the three-sample median in self-monitoring reports.

3. Toxicity Reduction Evaluation (TRE)

a. The Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order to be ready to respond to toxicity events. The Discharger shall review and update the work plan as necessary so that it remains current and applicable to the discharge and discharge facilities.

b. Within 30 days of exceeding the chronic toxicity trigger in section V.B.1.c.ii, above, the Discharger shall submit a TRE work plan, which shall be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.

c. Within 30 days of completing an accelerated monitoring test observed to exceed the trigger in section V.B.1.c.ii, above, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all Executive Officer comments.

d. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including U.S. EPA guidance materials. The Discharger shall conduct the TRE as a tiered evaluation as summarized below:

i. Tier 1 shall consist of basic data collection (routine and accelerated monitoring).

ii. Tier 2 shall consist of evaluation of treatment process optimization, including operational practices and in-plant process chemicals.

iii. Tier 3 shall consist of a toxicity identification evaluation (TIE).

iv. Tier 4 shall consist of evaluation of options for additional effluent treatment processes.

v. Tier 5 shall consist of evaluation of options for modifications of in-plant treatment processes.

vi. Tier 6 shall consist of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.

e. The Discharger may end the TRE at any stage if monitoring finds there is no longer consistent toxicity.

f. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. The Discharger shall employ all reasonable efforts using currently available TIE methodologies.

g. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the toxic substances from the discharge. The Discharger shall take all reasonable steps to reduce toxicity to levels below the chronic toxicity limit.

h. Many recommended TRE elements parallel required or recommended efforts related to source control, pollution prevention, and stormwater control programs. TRE efforts

should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to demonstrate compliance with TRE requirements.

i. Chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful. Regional Water Board enforcement considerations will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

VI. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall continue to participate in the Regional Monitoring Program, which collects data on pollutants and toxicity in San Francisco Bay water, sediment, and biota.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachments D and G) related to monitoring, reporting, and recordkeeping, with modifications shown in sections IX and X, below.

B. Self-Monitoring Reports (SMRs)

1. **SMR Format.** The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for SMR submittal in the event of a planned service interruption for electronic submittal.

2. **SMR Due Dates and Contents.** The Discharger shall submit SMRs by the due dates, and with the contents, specified below:

   a. Monthly SMRs — Monthly SMRs shall be due 30 days after the end of each calendar month, covering that calendar month. The monthly SMR shall contain the applicable items described in sections V.B and V.C of both Attachments D and G of this Order. See Provision VI.C.2 (Effluent Characterization Study and Report) of this Order for information that must also be reported with monthly SMRs.

   Monthly SMRs shall include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the Discharger shall include the results of such monitoring in the calculations and reporting for the SMR.

   b. Annual SMR — Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the items described in sections V.C.1.f of Attachment G. See also Provisions VI.C.2 (Effluent Characterization Study and Report) of the Order for requirements to submit reports with the annual SMR.

3. **Specifications for Submitting SMRs to CIWQS —** The Discharger shall submit analytical results and other information using one of the following methods:

Table E-5. CIWQS Reporting

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	**Attached File**
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for all results	
Dissolved Oxygen Temperature	Required for monthly maximum and minimum results only [1]	Discharger may use this method for all results or keep records
Antimony Arsenic Beryllium Cadmium Chromium Copper Cyanide Lead Mercury Nickel Selenium Silver Thallium Zinc Dioxins &Furans (by U.S. EPA Method 1613) Other Pollutants (by U.S. EPA methods 601, 602, 608, 610, 614, 624, and 625)	Required for all results [2]	
Analytical Method	Not required (Discharger may select "data unavailable") [1]	
Collection Time Analysis Time	Not required (Discharger may select "0:00") [1]	

Footnotes:

[1] The Discharger shall continue to monitor at the minimum frequency specified in this MRP, keep records of the measurements, and make the records available upon request.

[2] These parameters require EDF/CDF data upload or manual entry regardless of whether monitoring is required by this MRP or other provisions of this Order (except for biosolids, sludge, or ash provisions).

The Discharger shall arrange all reported data in a tabular format and summarize data to clearly illustrate whether the Facility is operating in compliance with effluent limitations. The Discharger is not required to duplicate the submittal of data entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format, the Discharger shall electronically submit the data in a tabular format as an attachment.

4. **Monitoring Periods.** Monitoring periods for all required monitoring shall be as set forth below unless otherwise specified:

Table E-6. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Order effective date	All times
1/Month	First day of calendar month following or on Order effective date	First day of calendar month through last day of calendar month

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
1/Quarter	Closest March 1, June 1, September 1, or December 1 before or after Order effective date [1]	March 1 through May 31 June 1 through August 31 September 1 through November 30 December 1 through February 28
1/Year	Closest January 1 before or after Order effective date [1]	January 1 through December 31
2/Year	Closest January 1 or July 1 before or after Order effective date [1]	January 1 through June 30 July 1 through December 31
Once	Closest January 1 before or after Order effective date	Closest January 1 before or after Order effective date through December 31, 2020

Footnote:

[1] Monitoring performed during the previous order term may be used to satisfy monitoring required by this Order.

5. **RL and MDL Reporting.** The Discharger shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as determined by the procedure in 40 C.F.R. part 136. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+/- a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected", or ND.

   d. The Discharger shall instruct laboratories to establish calibration standards so that the minimum level (ML) value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

6. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and in the Fact Sheet and Attachments A, D, and G. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

C. Discharge Monitoring Reports (DMRs)

The Discharger shall electronically certify and submit DMRs with SMRs using the Electronic Self-Monitoring Reports module eSMR 2.5 or the latest upgraded version. Information about electronic DMR submittal is available at the DMR website at http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

VIII. BYPASS REQUIREMENTS

If the Discharger bypasses any treatment units under the conditions stated in Attachment D, section I.G.2, it shall monitor flows and collect samples daily at affected discharge points for all constituents with effluent limits (except chronic toxicity) for the duration of the bypass (including acute toxicity using static renewals). Because such discharges may, pending the results of the monitoring, result in noncompliance that may endanger health or the environment, the Discharger shall follow the reporting requirements in Attachment D, Section V.E.1.

IX.MODIFICATIONS TO ATTACHMENT G

This MRP modifies Attachment G as indicated below:

A. Attachment G section V.C.1.c.2 is revised as follows:

2) When determining compliance with an average monthly or maximum daily effluent limitation, and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

   ii. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

B. Attachment G sections V.C.1.f and V.C.1.g are revised as follows, and section V.C.1.h (Reporting data in electronic format) is deleted:

f. Annual self-monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events (this summary table is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater (this item is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);

4) List of approved analyses, including the following:

(i) List of analyses for which the Discharger is certified;

(ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and

(iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all stormwater to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated

time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

g. Report submittal

The Discharger shall submit SMRs addressed as follows, unless the Discharger submits SMRs electronically to CIWQS:

California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: NPDES Wastewater Division

h. Reporting data in electronic format – *Deleted*

APPENDIX E-1

CHRONIC TOXICITY
DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

A. No observed effect level (NOEL) for compliance determination is equal to IC_{25} or EC_{25}. If the IC_{25} or EC_{25} cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

B. Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Karber. EC_{25} is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

C. Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC_{25} is the estimated concentration of toxicant that would cause a 25 percent reduction in growth or in average young per female. IC values may be calculated using a linear interpolation method such as U.S. EPA's Bootstrap Procedure.

D. No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to source control efforts, or

2. Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES permit application for reissuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit expiration date.

B. Design of the screening phase shall, at a minimum, consist of the following elements:

1. Use of test species specified in Appendix E-2, attached, and use of the protocols referenced in those tables.

2. Two stages:

a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Appendix E-2 (attached).

b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results.

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series of 100%, 50%, 25%, 12.5%, 6.25%, and 0%, where "%" is percent effluent as discharged, or as otherwise approved by the Executive Officer if different dilution ratios are needed to reflect discharge conditions.

C. The Discharger shall submit a screening phase proposal. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharger shall commence with screening phase monitoring.

APPENDIX E-2
SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

Table AE-1. Critical Life Stage Toxicity Tests for Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Alga	*(Skeletonema costatum)* *(Thalassiosira pseudonana)*	Growth rate	4 days	1
Red alga	*(Champia parvula)*	Number of cystocarps	7–9 days	3
Giant kelp	*(Macrocystis pyrifera)*	Percent germination; germ tube length	48 hours	2
Abalone	*(Haliotis rufescens)*	Abnormal shell development	48 hours	2
Oyster Mussel	*(Crassostrea gigas)* *(Mytilus edulis)*	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	*(Strongylocentrotus purpuratus, S. franciscanus)* *(Dendraster excentricus)*	Percent fertilization or larval development	1 hour or 72 hours	2
Shrimp	*(Americamysis bahia)*	Percent survival; growth	7 days	3
Shrimp	*(Holmesimysis costata)*	Percent survival; growth	7 days	2
Topsmelt	*(Atherinops affinis)*	Percent survival; growth	7 days	2
Silversides	*(Menidia beryllina)*	Larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for Conducting Static 96-Hour Toxicity Tests with Microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.

2. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms. EPA/600/R-95/136. August 1995.

3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/821/R-02/014. October 2002.

Table AE-2. Critical Life Stage Toxicity Tests for Fresh Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
Fathead minnow	*(Pimephales promelas)*	Survival; growth rate	7 days	4
Water flea	*(Ceriodaphnia dubia)*	Survival; number of young	7 days	4
Alga	*(Selenastrum capricornutum)*	Final cell density	4 days	4

Toxicity Test Reference:

1. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, fourth Edition Chronic manual (EPA-821-R-02-013, October 2002).

Table AE-3. Toxicity Test Requirements for Stage One Screening Phase

Requirements	Receiving Water Characteristics		
	Discharges to Coast	Discharges to San Francisco Bay [1]	
	Ocean	Marine/Estuarine	Freshwater
Taxonomic diversity	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type: Freshwater [2] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0
Total number of tests	4	5	3

Footnotes:

[1] (a) Marine refers to receiving water salinities greater than 1 part per thousand (ppt) at least 95 percent of the time during a normal water year.

(b) Freshwater refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.

(c) Estuarine refers to receiving water salinities that fall between those of marine and freshwater, as described above.

[2] The freshwater species may be substituted with marine species if:

(a) The salinity of the effluent is above 1 ppt greater than 95 percent of the time, or

(b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

ATTACHMENT F - FACT SHEET

Contents

Tables

ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. As described in section II.B of the Order, the Regional Water Board incorporates this Fact Sheet as findings supporting the issuance of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility:

Table F-1. Facility Information

WDID	2 071059001
CIWQS Place ID	269601
Discharger	USS-POSCO Industries
Facility Name	Pittsburg Plant
Facility Address	900 Loveridge Road Pittsburg, CA 94565 Contra Costa County
Facility Contact, Title, Phone	Freddy Ripoli Group Manager, Environmental and Safety (925) 439-6316
Authorized Person to Sign and Submit Reports	Same as facility contact
Mailing Address	Same as facility address
Billing Address	Same as facility address
Facility Type	Steel Finishing Plant (SIC 3312)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	No
Reclamation Requirements	No
Mercury and PCBs Requirements	NPDES Permit No. CA0038849
Permitted Flow	28 million gallons per day (MGD) – average daily dry weather design flow
Watershed	Suisun Basin
Receiving Water	New York Slough, part of the Sacramento/San Joaquin Basin
Receiving Water Type	Estuarine

A. USS-POSCO Industries (Discharger) owns and operates a steel finishing plant (Facility) at 900 Loveridge Road in Pittsburg.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Discharger is regulated pursuant to National Pollutant Discharge Elimination System (NPDES) Permit No. CA0005002. The Discharger was previously subject to the NPDES permit in Order No. R2-2011-0048 (previous order), which became effective on September 1, 2011. The Discharger filed a Report of Waste Discharge and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on December 14, 2015.

The discharge is also regulated under NPDES Permit No. CA0038849, which establishes requirements on mercury and polychlorinated biphenyls (PCBs) from wastewater discharges to San Francisco Bay. This Order does not affect that permit.

The Discharger is authorized to discharge subject to WDRs in this Order at the discharge location described in Table 2 of this Order. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the effective period for the discharge authorization. Pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES regulation requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

A. Wastewater Treatment and Stormwater Control

1. Wastewater Treatment.

The Discharger owns and operates a 420-acre steel finishing plant. The Facility finishes purchased coils of hot-rolled steel but does not manufacture steel from raw materials. The processes include pickling with hydrochloric and sulfuric acid, cold rolling, alkaline cleaning, annealing, hot-dip galvanizing, and electrolytic tin and chromium plating.

Attachment C provides a schematic diagram of the Facility treatment processes. The following treatment systems provide preliminary treatment in the main part of the Facility prior to final treatment at the main treatment plant in the northeast corner of the Facility:

- The oil separation treats oily wastewater from cold rolling mills.
- The outgoing treatment system reduces chromium VI from the chromium recovery unit.
- The primary neutralization system neutralizes the pH of spent alkaline cleaning baths.

Partly treated wastewater from the above processes flows to the main treatment plant along with other untreated waste streams (see Attachment C).The treatment plant also receives a maximum of 5 million gallons per year of wastewater from impoundments and purge water from monitoring wells.

Attachment C provides a diagram of the Facility's main wastewater treatment plant. It consists of a pump station (Lift Station No. 3), an oil/water separator, a mixer building to adjust the pH with lime or caustic for metals precipitation, two clarifiers, and two neutralization tanks for final pH adjustment (hydrochloric acid in the first stage and hydrochloric acid or caustic in the second stage). Solids from the clarifier are dewatered with a filter press and hauled to the Facility's onsite landfill. The filtrate is returned to Lift Station No. 3 for treatment. Treated wastewater is discharged to New York Slough at Discharge Point No. 001.

2. Stormwater Management

The treatment plant also receives most of the stormwater from the Facility's developed areas (e.g. parking lots, buildings, roadways, and materials storage areas). However, untreated stormwater is discharged to New York Slough at Discharge Point No. 002 during large storms when the pumping capacity is exceeded.

B. Discharge Point and Receiving Waters

Discharge of treated industrial wastewater and stormwater to New York Slough occurs at Discharge Point No. 001. The discharge of untreated stormwater to New York Slough occurs at Discharge Point No. 002. The discharge locations are shown in Appendix C. New York Slough is part of the Sacramento-San Joaquin Delta.

C. Previous Requirements and Monitoring Data

The table below presents the effluent limitations contained in the previous order and representative monitoring data from the previous order term:

Table F-2. Previous Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitations		Monitoring Data (7/11 – 7/15)		
		Monthly Average	Maximum Daily	No. of Samples / No. Below Detection Limit	Highest Daily Discharge	Average ±Standard Deviation
Total Suspended Solids	lbs/day	2200	4700	110/30	380 [1]	110±63 [1]
Oil and Grease	lbs/day	880	2100	54/54	<240 [1]	74±57 [1]
Lead	lbs/day	14	30	109/109	<0.061 [1]	0.0087±0.011 [1]
Zinc	lbs/day	5.6	17	41/24	6.9 [1]	1.2±1.3 [1]
Naphthalene	lbs/day	---	0.68	55/55	<0.04 [1]	0.016±0.008 [1]
Tetrachloroethylene	lbs/day	---	1.0	52/52	<0.03 [1]	0.0079±0.067 [1]
Chromium	lbs/day	35	57	110/66	0.21 [1]	0.037±0.046 [1]
Silver	lbs/day	4.9	8.8	53/53	<0.073 [1]	0.0058±0.0099 [1]
pH	s.u.	6.5 – 8.5		3335/0	6.6-8.5 [2]	7.2±0.2
Settleable Matter	mL/L	0.1	0.2	108/108	<0.05 [1]	[3]
Aldrin	µg/L	0.00013	0.00026	113/113	<0.1 [4]	0.0013±0.0065 [5]
Cadmium	µg/L	1.0	1.9	113/56	0.41	0.091±0.088 [5]
Carbon Tetrachloride	µg/L	0.25	0.50	113/7	0.73	0.096±0.15 [5]
Copper [2]	µg/L	3.3 [6]	5.5 [6]	99/2	7.7	2.2±1.3 [5]
Cyanide	µg/L	6.8	14	113/58	2.9	0.94±0.61 [5]
Dioxin TEQ	µg/L	1.3E-08	2.6E-08			
Nickel	µg/L	7.3	12	112/4	7.3	2.5±1.1 [5]
Temperature	ºF	---	93	1669/0	92	81±8
Acute Toxicity	% survival	[7]		231/0	30 [8]	98±6
Chronic Toxicity	TUc	[9]		42/24	6.9	1.2±1.3

Unit Abbreviations:

mg/L = milligrams per liter
µg/L = micrograms per liter
mg/L as N = milligrams per liter as nitrogen
MPN/100 mL = most probable number per 100 milliliters

% Survival = percent survival
TUc = chronic toxicity units

Footnotes:

[1] Estimated by multiplying the average monthly concentration by the average monthly flow rate. The detection limit was used for the concentration when the concentration was below the detection limit.
[2] The highest and lowest reported pH value.
[3] All values were <0.05 mL/L.
[4] The highest detection limit.
[5] Half the detection limit was used for values less than the detection limit.
[6] These limits apply only if the concentrations are greater than 15 µg/L.
[7] An 11-sample median less than 90 percent survival. An 11-sample 90th percentile of 70 percent survival
[8] The lowest single-sample percent survival was 30 percent.
[9] A 3-sample median of less than 4 TUc. A single-sample maximum of less than 8 TUc.

D. Compliance Summary

The Discharger had six effluent limit violations during the term of the previous order. Five were due to high levels of carbon tetrachloride in March and June 2012. In these five cases, the Discharger determined that the source was contaminated groundwater leaching into a stormwater sump that pumped to the treatment system. As a corrective measure, the Discharger rebuilt the sump to prevent cross-contamination. Since the Discharger repaired the sump, there have been no additional carbon tetrachloride violations. In December 2013, the Regional Water Board issued a $24,000 mandatory minimum penalty for these violations.

The remaining violation related to chronic toxicity and occurred in May 2016. The Discharger reported a value of 9.7 TUc, which exceeds the single-sample limit of 8 TUc. The Discharger is investigating the source of this toxicity.

E. Planned Changes.

The Discharger has no planned changes for this permit term.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

A. Legal Authorities

This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with section 13260) for discharges to land and/or waters of the State. This Order is also issued pursuant to Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit for point source discharges from the Facility to surface waters.

B. California Environmental Quality Act

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act, Public Resources Code division 13, chapter 3 (commencing with section 21100).

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses,

establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, this Order implements State Water Board Resolution No. 88-63, which established State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The table below lists beneficial uses of New York Slough:

Table F-3. Beneficial Uses

Discharge Points	Receiving Water	Beneficial Uses	
001 and 002	New York Slough	Municipal and Domestic Supply (MUN) Industrial Service Supply (IND) Ocean, Commercial, and Sport Fishing (COMM) Fish Spawning (SPWN) Estuarine Habitat (EST) Wildlife Habitat (WILD)	Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE)

2. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. This plan supersedes other narrative sediment quality objectives and establishes new sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries. This Order implements the sediment quality objectives of this plan for both the existing and proposed discharges.

3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About 40 criteria in the NTR apply in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and incorporated the previously adopted NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001. These rules contain water quality criteria for priority pollutants.

4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board established in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives, and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

5. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 require that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, which is deemed to incorporate the federal antidegradation policy where

the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. (See section IV.D.2 Antidegradation.)

6. **Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. (See section IV.D.1 Anti-Backsliding.)

D. Impaired Waters on CWA 303(d) List

In July 2015, U.S. EPA approved a revised list of impaired waters prepared pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt total maximum daily loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for non-point sources and are established to achieve the water quality standards for the impaired waters.

New York Slough is part of the Sacramento-San Joaquin Delta. The Sacramento-San Joaquin Delta is 303(d)-listed as an impaired water body for chlordane, DDT, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, dioxin-like PCBs, and selenium. U.S. EPA has approved TMDLs for PCBs and mercury in San Francisco Bay and selenium in the North Bay. The TMDLs for mercury and PCBs apply to this discharge and are implemented through NPDES Permit No. CA0038849. In addition, the Discharger was assigned a wasteload allocation in the selenium TMDL. The Discharger's current discharge concentrations of selenium are expected to comply with this wasteload allocation. As shown in Fact Sheet section IV.C.3, the discharge is not a significant source of chlordane, DDT, dieldrin, dioxins, or furans because these pollutants have not been detected in the discharge.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters. This Order establishes numeric technology-based limits and water quality-based limits for Discharge Point No. 001 (treated wastewater) and narrative limits and discharge specifications for Discharge Point No. 002 (stormwater) as described in Provision VI.C.4.

A. Discharge Prohibitions

1. Prohibitions in this Order

a. Discharge Prohibition III.A (Discharge in a manner different from that described in this Order): This prohibition is based on 40 C.F.R. section 122.21(a) and Water Code section 13260, which require filing an application and Report of Waste Discharge before a discharge can occur. Discharges not described in the application and Report of Waste Discharge, and subsequently in this Order, are prohibited.

b. Discharge Prohibition III.B (Bypass): This prohibition is based on 40 C.F.R. section 122.41(m) (see Attachment D section I.G).

2. Exceptions to Basin Plan Discharge Prohibition

Basin Plan Table 4-1, Discharge Prohibition 1, prohibits discharges not receiving a minimum initial dilution of at least 10:1 and discharges into shallow waters or dead-end sloughs. Basin Plan section 4.2 provides for exceptions under certain circumstances:

- An inordinate burden would be placed on the Discharger relative to the beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means;
- A discharge is approved as part of a reclamation project;
- Net environmental benefits will be derived as a result of the discharge; or
- A discharge is approved as part of a groundwater cleanup project.

The Basin Plan further states:

> Significant factors to be considered by the Regional Water Board in reviewing requests for exceptions will be the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequence of such discharges.

This Order continues granting an exception to Basin Plan Discharge Prohibition 1 for the following reasons:

- Avoiding discharge to shallow waters is an inordinate burden. The Discharger would have to build an outfall pipe about 50 feet into New York Slough, a navigational channel that is regularly dredged by the Army Corps of Engineers. The costs of building and maintaining a deepwater outfall into the channel would be overly burdensome relative to the small decrease in mixing the outfall would provide. Although the discharge from Discharge Point No. 001 is a shallow-water discharge, the shoreline has strong tidal currents that provide mixing similar to a deepwater outfall. The Discharger's 1994 dilution study indicates that the effluent is diluted to 12.5:1 about 250 feet from shore under slack tide conditions. The dilution is higher during ebb and flood tide conditions. The hydraulic conditions (flow rates and channel geometry) have not changed significantly since 1994, so the study remains applicable to the site today.

- The Discharger provides an equivalent level of protection by discharging to a location with strong tidal currents and by providing reliable treatment. The Facility relies on a relatively simple treatment process that involves precipitating metals by pH control. The Facility does not use biological processes and is therefore not vulnerable to biological upsets. The Discharger's violations of its effluent limits, as discussed in Fact Sheet section II.D.1, were minor and infrequent. By relying solely on chemical control, the Discharger can address any noncompliance quickly by adjusting chemical feed rates. (In contrast, biological treatment systems can take a long time to restore if the biological community experiences die-off.)

B. Technology-Based Effluent Limitations

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(a) require that permits include applicable technology-based limitations and standards based on the following:

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

- Best available technology economically achievable (BAT) represents the best existing performance of treatment technology that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

- Best conventional control technology (BCT) represents the control from existing industrial point sources of conventional pollutants, including biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in the effluent discharge and the benefit that would result and also the cost effectiveness of additional industrial treatment beyond BPT.

- New source performance standards (NSPS) represents the best available demonstrated control technology standards for new sources. The intent of the NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

U.S. EPA established Effluent Limitation Guidelines (ELGs) for iron and steel manufacturing processes and metal finishing processes in 40 C.F.R. part 420 and 40 C.F.R. part 433.Plant operations involve iron and steel manufacturing and metal finishing. Iron and steel manufacturing processes include sulfuric acid pickling (strip, sheet, and plate), hydrochloric acid pickling (strip, sheet, and plate; fume scrubbers; and acid regeneration), cold rolling milling (single stands and multiple stands), alkaline cleaning (continuous), and hot coating (strip, sheet, and miscellaneous). Metal finishing operations include electroplating.

Table F-4 summarizes the applicable ELGs. This Order imposes the most stringent requirements (BPT, BAT, or BCT) indicated in the ELGs. NSPS ELGs do not apply because the Facility was constructed before U.S. EPA developed the ELGs in the 1980s.

Table F-4. Metal Finishing ELGs

	BPT		BAT		BCT		Most Stringent ELG	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
Sulfuric Acid Pickling (40 C.F.R. Part 420, Subpart I)								
Strip, sheet, and plate (lbs/1000 lbs of product) 40 C.F.R. § 420.92(a)(3) (BPT), 40 C.F.R. § 420.93(a)(3) (BAT), and 40 C.F.R. § 420.97(a)(3) (BCT)								
TSS	0.0526	0.0225	---	---	0.0526	0.0225	0.0526	0.0225
Lead	0.000338	0.000113	0.000338	0.000113	---	---	0.000338	0.000113
Zinc	0.0000451	0.000150	0.000451	0.00015	---	---	0.000451	0.00015
Hydrochloric Acid Pickling (40 C.F.R. Part 420, Subpart I)								
Strip, sheet, and plate (lbs/1000 lbs of product) [40 C.F.R. § 420.92(b)(2)(BPT), 40 C.F.R. § 420.93(b)(2)(BAT), and 40 C.F.R. § 420.97(b)(2)(BCT)]								
TSS	0.0818	0.0350	---	---	0.0818	0.0350	0.0818	0.0350
Lead	0.000526	0.000175	0.000526	0.000175	---	---	0.000526	0.000175
Zinc	0.0000701	0.000234	0.000701	0.000234	---	---	0.000701	0.000234
Fume scrubbers (kg)[1] [40 C.F.R. § 420.92(b)(4)(BPT), 40 C.F.R. § 420.93(b)(4)(BAT), and 40 C.F.R. § 420.97(b)(4)(BCT)]								
TSS	5.72	2.45	---	---	5.72	2.45	5.72	2.45
Lead	0.0368	0.0123	0.0368	0.0123	---	---	0.0368	0.0123
Zinc	0.0491	0.0164	0.0491	0.0164	---	---	0.0491	0.0164
Acid regeneration (kg) [40 C.F.R. § 420.92(b)(5)(BPT), 40 C.F.R. § 420.93(b)(5)(BAT), and 40 C.F.R. § 420.97(b)(5)(BCT)]								
TSS	38.2	16.3	---	---	38.2	16.3	38.2	16.3
Lead	0.245	0.0819			---	---	0.245	0.0819
Zinc	0.327	0.109			---	---	0.327	0.109
Cold Rolling Mill (40 C.F.R. Part 420, Subpart J)								
Recirculation-multiple stand (lbs/1000 lbs of product) [40 C.F.R. § 420.102(a)(2)(BPT), 40 C.F.R. § 420.103(a)(2)(BAT), and 40 C.F.R. § 420.107(a)(2)(BCT)]								
TSS	0.00626	0.00313	---	---	0.00626	0.00313	0.00626	0.00313
Oil and Grease	0.00261	0.00104	---	---	0.00261	0.00104	0.00261	0.00104
Lead	0.0000469	0.0000156	0.0000469	0.0000156	---	---	0.0000469	0.0000156
Zinc	0.0000313	0.0000104	0.0000313	0.0000104	---	---	0.0000313	0.0000104
Naphthalene	0.0000104	---	0.0000104	---	---	---	0.0000104	---
Tetrachloroethylene	0.0000156	---	0.0000156	---	---	---	0.0000156	---
Direct application-multiple stand (lbs/1000 lbs of product) [40 C.F.R. § 420.102(a)(4)(BPT), 40 C.F.R. § 420.103(a)(4)(BAT), and 40 C.F.R. § 420.107(a)(4)(BCT)]								
TSS	0.100	0.0501	---	---	0.100	0.0501	0.100	0.0501
Oil and Grease	0.0417	0.0167	---	---	0.0417	0.0167	0.0417	0.0167
Lead	0.000751	0.00025	0.000751	0.00025	---	---	0.000751	0.00025
Zinc	0.000501	0.000167	0.000501	0.000167	---	---	0.000501	0.000167

Naphthalene	0.000167	---	0.000167	---	---	---	0.000167	---
Tetrachloroethylene	0.000250	---	0.000250	---	---	---	0.000250	---
Alkaline Cleaning (40 C.F.R. Part 420, Subpart K)								
Continuous (lbs/1000 lbs of product) [40 C.F.R. § 420.112(b)(BPT) and 40 C.F.R. § 420.117(b)(BCT)]								
TSS	0.102	0.0438	---	---	0.102	0.0438	0.102	0.0438
Oil and Grease	0.0438	0.0146	---	---	0.0438	0.0146	0.0438	0.0146
Hot Coating (40 C.F.R. Part 420, Subpart L)								
Strip, sheet, and miscellaneous (lbs/1000 lbs of product) [40 C.F.R. § 420.122(a)(BPT) and 40 C.F.R. § 420.127(a)(BCT)]								
TSS	0.175	0.0751	---	---	0.175	0.0751	0.175	0.0751
Oil and Grease	0.0751	0.025	---	---	0.0751	0.025	0.0751	0.025
Lead	0.00113	0.000367	0.00113	0.000367	---	---	0.00113	0.000367
Zinc	0.00150	0.000500	0.00150	0.000500	---	---	0.00150	0.000500
Metal Finishing (40 C.F.R. Part 433, Subpart A)								
Electroplating (mg/L) [40 C.F.R. § 433.13(BPT) and 40 C.F.R. § 433.14(BAT)]								
Cadmium	0.69	0.26	0.69	0.26	---	---	0.69	0.26
Chromium	2.77	1.71	2.77	1.71	---	---	2.77	1.71
Copper	3.38	2.07	3.38	2.07	---	---	3.38	2.07
Lead	0.69	0.43	0.69	0.43	---	---	0.69	0.43
Nickel	3.98	2.38	3.98	2.38	---	---	3.98	2.38
Silver	0.43	0.24	0.43	0.24	---	---	0.43	0.24
Zinc	2.61	1.48	2.61	1.48	---	---	2.61	1.48
Cyanide	1.2	0.65	1.2	0.65	---	---	1.2	0.65
Total Toxic Organics[2]	2.13	---	2.13	---	---	---	2.13	---
Oil and Grease	52	26	---	---	---	---	52	26
TSS	60	31	---	---	---	---	60	31

Footnotes:

[1] ELGs for fume scrubbers, acid regeneration, and electroplating are not production-based.

[2] Total toxic organics are listed in 40 C.F.R. section 433.11(e).

The technology-based limits in this Order are the sum of the ELG-based allotments for each process. The ELGs for iron and steel manufacturing processes are mass-based and, in most cases, are based on the weight of the product generated through each process (i.e., pounds of pollutant per 1000 pounds of product). For fume scrubbers and acid regeneration, the allotments are given in kilograms without regard for the amount of product produced. The ELGs for metal finishing (i.e., electroplating) are concentration-based.

In addition to the ELGs shown in Table F-4, 40 C.F.R. parts 420 and 433 contain many duplicative pH requirements. In each case, pH is to be limited to the range of 6.0 to 9.0. Because the Basin Plan requires a more restrictive pH range (6.5-8.5) for shallow water discharges, the more restrictive pH limits apply.

ELGs specify oil and grease limits for facilities with acid pickling wastewaters treated with cold rolling wastewaters. However, because the Facility does not treat acid pickling wastewaters with cold rolling wastewaters, those oil and grease ELGs do not apply. Similarly, for some processes, chromium and nickel ELGs do not apply because cold rolling wastewaters are not treated with descaling or combination acid pickling wastewaters, or because galvanizing operations do not discharge wastewaters from the chromate rinse step.

2. Metal Manufacturing Limit Calculations

The Discharger's estimated production rates were used for the production rate-based ELGs. Table F-5 lists the Discharger's production rates and calculates the limits for each production process by multiplying the ELGs by the production rates (or flow):

Table F-5. Production-Based Allotments

Category	Pollutant	ELGs Monthly Average (lbs/1000 lbs product)	ELGs Daily Maximum (lbs/1000 lbs product)	Production Rate (lbs/day) [2]	Category Limit - Average Monthly (lbs/day)	Category Limit – Daily Maximum (lbs/day)
Sulfuric Acid Pickling						
A	Strip, sheet, and plate					
	TSS	0.0225	0.0526	2,660,000	60	140
	Lead	0.000113	0.000338		0.30	0.89
	Zinc	0.00015	0.000451		0.40	1.20
Hydrochloric Acid Pickling						
B	Strip, sheet, and plate					
	TSS	0.0350	0.0818	8,000,000	280	650
	Lead	0.000175	0.000526		1.4	4.2
	Zinc	0.000234	0.000701		1.9	5.6
C	Fume scrubbers					
	TSS	2.45 kg/day	5.72 kg/day	[3]	5.4	13
	Lead	0.0123 kg/day	0.0368 kg/day		0.027	0.081
	Zinc	0.0164 kg/day	0.0491 kg/day		0.036	0.11
D	Acid regeneration					
	TSS	16.3 kg/day	38.2 kg/day	[3]	36	84
	Lead	0.0819 kg/day	0.245 kg/day		0.18	0.54
	Zinc	0.109 kg/day	0.327 kg/day		0.24	0.72
Cold Rolling Mill						
E	Recirculation –multiple stands					

	TSS	0.00313	0.00626	8,000,000	25	50
	Oil and Grease	0.00104	0.00261		8.3	21
	Lead	0.0000156	0.0000469		0.12	0.38
	Zinc	0.0000104	0.0000313		0.083	0.25
	Naphthalene	---	0.0000104		---	0.083
	Tetrachloroethylene	---	0.0000156		---	0.12
F	Direct application – single stand					
	TSS	0.0133	0.0225	4,000,000	53	90
	Oil and Grease	0.00376	0.00939		15	38
	Lead	0.0000563	0.000169		0.23	0.68
	Zinc	0.0000376	0.000113		0.15	0.45
	Naphthalene	---	0.0000376		---	0.15
	Tetrachloroethylene	---	0.0000563		---	0.23
G	Direct application – multiple stands					
	TSS	0.0501	0.100	2,660,000	130	270
	Oil and Grease	0.017	0.042		45	110
	Lead	0.00025	0.00075		.067	2.0
	Zinc	0.000167	0.00050		0.44	1.3
	Naphthalene	---	0.000167		---	0.44
	Tetrachloroethylene	---	0.000250		---	0.67
Alkaline Cleaning						
H	Continuous					
	TSS	0.0438	0.102	8,000,000	350	820
	Oil and Grease	0.0146	0.0438		120	350
Hot Coating						
I	Strip, sheet and miscellaneous					
	TSS	0.0751	0.175	2,660,000	200	470
	Oil and Grease	0.025	0.0751		67	200
	Lead	0.000376	0.00113		1.0	3.0
	Zinc	0.00050	0.0015		1.3	4.0
Metal Finishing						
J	Electroplating					
	Cadmium	0.26 mg/L	0.69 mg/L	[3]	0.26 mg/L	0.69 mg/L
	Chromium	1.71 mg/L	2.77 mg/L		1.71 mg/L	2.77 mg/L
	Copper	2.07 mg/L	3.38 mg/L		2.07 mg/L[4]	3.38 mg/L[4]
	Lead	0.43 mg/L	0.69 mg/L		0.43 mg/L	0.69 mg/L
	Nickel	2.38 mg/L	3.98 mg/L		2.38 mg/L	3.98 mg/L
	Silver	0.24 mg/L	0.43 mg/L		0.24 mg/L	0.43 mg/L
	Zinc	1.48 mg/L	2.61 mg/L		1.48 mg/L	2.61 mg/L
	Cyanide	0.65 mg/L	1.2 mg/L		0.65 mg/L [4]	1.2 mg/L [4]
	Total Toxic Organics [5]	---	2.13 mg/L		---	2.13 mg/L
	Oil and Grease	26 mg/L	52 mg/L		26 mg/L [6]	52 mg/L [6]
	TSS	31 mg/L	60 mg/L		31 mg/L	60 mg/L

Footnotes:

[1] Unless otherwise indicated, units are pounds per 1000 pounds of product.

[2] Unless otherwise indicated, units are pounds per day.

[3] ELGs for fume scrubbers, acid regeneration, and electroplating are not production based.

[4] Final concentration limits are for copper and cyanide are water quality-based

[5] Total toxic organics are listed in 40 C.F.R. 433.11(e).

[6] Final Oil and Grease limits (10 mg/L monthly average and 20 mg/L daily maximum) are based on the Basin Plan Table 4-2.

Final technology-based limits are calculated by summing the all the process allotments for each pollutant as shown in Table F-6 below. To avoid backsliding, this Order retains the

limits in the previous order when those limits are more stringent than the newly calculated limits.

Table F-6. Final ELGs

Pollutant	Process	Calculated Limits	
		Monthly Average (lbs/day)	Daily Maximum (lbs/day)
TSS	A	60	140
	B	280	650
	C	5.4	13
	D	36	84
	E	25	50
	F	53	90
	G	130	270
	H	350	820
	I	200	470
	Sum	**1100**	**2600**
Lead	A	0.3	0.9
	B	1.4	4.2
	C	0.03	0.1
	D	0.2	0.5
	E	0.1	0.4
	F	0.2	0.7
	G	0.7	2.0
	I	1.0	3.0
	Sum	**3.9**	**12**
Zinc	A	0.4	1.2
	B	1.9	5.6
	C	0.04	0.1
	D	0.2	0.7
	E	0.1	0.3
	F	0.2	0.5
	G	0.4	1.3
	I	1.3	4.0
	Sum	**4.6**	**14**
Oil and Grease	E	8.3	21
	F	15	38
	G	45	110
	H	120	350
	I	67	200
	Sum	**250**	**720**
Naphthalene	E	---	0.08
	F	---	0.15
	G	---	0.44
	Sum	---	**0.68**
Tetrachloroethylene	E	---	0.12
	F	---	0.23
	G	---	0.67
	Sum	---	**1.0**

3. Temperature

The temperature limit (92ºF max) is performance-based (99th percentile of the effluent temperature data collected from September 2011 through February 2016).

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

For toxic pollutants, this Order contains WQBELs that implement water quality objectives that protect beneficial uses. CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than federal technology-based requirements where necessary to achieve applicable water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective, WQBELs must be established using (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting a narrative criterion, supplemented with relevant information (40 C.F.R. § 122.44[d][1][vi]). The process for determining reasonable potential and calculating WQBELs is intended to achieve applicable water quality objectives and criteria and to protect designated uses of receiving waters as specified in the Basin Plan. This Order imposes numeric effluent limitations for toxic pollutants with reasonable potential to cause or contribute to exceedances of water quality standards.

2. Beneficial Uses and Water Quality Criteria and Objectives

Discharge Point No. 001 discharges to New York Slough. Fact Sheet section III.C.1, above, identifies the beneficial uses of New York Slough. Water quality criteria and objectives to protect these beneficial uses are described below:

a. Basin Plan Objectives. The Basin Plan specifies numeric water quality objectives for 10 priority pollutants and narrative water quality objectives for toxicity and bioaccumulation. The narrative toxicity objective states, "All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The narrative bioaccumulation objective states, "Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered."

1. Bioaccumulation. It is the consensus of the scientific community that dioxins and furans associate with particulates, accumulate in sediments, and bioaccumulate in the fatty tissue of fish and other organisms. Accordingly, the Basin Plan's narrative bioaccumulation water quality objective applies to these pollutants. Elevated levels of dioxins and furans in San Francisco Bay fish tissue demonstrate that the narrative bioaccumulation water quality objective is not being met. U.S. EPA has therefore placed San Francisco Bay, the Sacramento-San Joaquin Delta, and Suisun Bay on its

303(d)-list of receiving waters where water quality objectives are not being met after imposition of applicable technology-based requirements.

When the CTR was promulgated, U.S. EPA stated its support of the regulation of dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs). U.S. EPA stated, "For California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric WQBELs for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme" (65 Fed. Reg. 31695-31696, May 18, 2000). This Order uses a TEQ scheme based on a set of toxicity equivalency factors (TEFs) the World Health Organization developed in 1998 and a set of bioaccumulation equivalency factors (BEFs) U.S. EPA developed for the Great Lakes region (40 C.F.R. part 132, Appendix F) to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD). Although the 1998 World Health Organization scheme includes TEFs for dioxin-like PCBs, they are not included in this Order's TEQ scheme. The CTR has established a specific water quality criterion for PCBs, and dioxin-like PCBs are included in the analysis of total PCBs.

The CTR establishes a numeric water quality objective for 2,3,7,8-TCDD of 1.4×10^{-8} µg/L for the protection of human health when aquatic organisms are consumed. The CTR criterion is used as a criterion for dioxin-TEQ because dioxin-TEQ represents a toxicity weighted concentration equivalent to 2,3,7,8-TCDD, thus translating the narrative bioaccumulation objective into a numeric criterion.

2. **Toxicity.** The chronic toxicity narrative objective is translated into a numeric criterion of 1.0 chronic toxicity unit (TU_c). Toxic units are an indicator of the pollutant of concern (i.e., toxicity). At 1.0 TU_c, there is no observable detrimental effect when an indicator organism is exposed to 100 percent effluent; therefore, 1.0 TU_c is a direct translation of the narrative objective into a number. Moreover, in *Technical Support Document for Water Quality-based Toxics Control* (Technical Support Document or TSD) (EPA/505/2-90-001, section 3.3.3, "Step 3: Decision Criteria for Permit Limit Development," page 60), U.S. EPA recommends that 1.0 TU_c be used as a criterion continuous concentration, which generally implies a four-day average (TSD, Appendix D, page D-2).

b. CTR Criteria. The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of "water and organisms" and others are for consumption of "organisms only." The more stringent criteria applies to New York Slough because it is a source of drinking water.

c. NTR Criteria. The NTR establishes numeric aquatic life and human health criteria for a number of toxic pollutants for San Francisco Bay waters upstream to and including New York Slough and the Sacramento-San Joaquin Delta. The NTR criteria apply to New York Slough.

d. Sediment Quality Objectives. The *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* contains a narrative water quality objective:

"Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California." This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limit.

e. Receiving Water Salinity. Basin Plan section 4.6.2 (like the CTR and NTR) states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water are to be considered in determining the applicable water quality objectives. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater criteria apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to waters with salinities between these two categories, or tidally-influenced freshwaters that support estuarine beneficial uses, the water quality objectives are the lower of the salt or freshwater objectives (the latter calculated based on ambient hardness) for each substance.

New York Slough is fresh most of the time, but it is an estuarine environment based on salinity data generated through the Regional Monitoring Program (RMP) at the Sacramento (BG20) and San Joaquin (BG30) sampling stations between 1993 and 2013. In that period, the salinity ranged from 0.0 to 4.2 ppt, but only 16 percent of the samples were above 1 ppt. Therefore, the reasonable potential analysis and WQBELs are based on the lower of the freshwater and saltwater water quality criteria and objectives.

f. Receiving Water Hardness. Ambient hardness data were used to calculate freshwater water quality objectives that are hardness dependent. Receiving water monitoring for hardness was done in New York Slough at Monitoring Locations RSW-001, RSW-002, RSW-003, and RSW-004 from September 2011 through August 2015. Hardness ranged from 76 to 878 mg/L as $CaCO_3$. Hardness results above 400 mg/L were censored, and the adjusted geometric mean of the remaining data (114 mg/L as $CaCO_3$) was used to calculate the water quality objectives for hardness-dependent pollutants.

g. Site-Specific Metals Translators. Effluent limitations for metals must be expressed as total recoverable metal (40 C.F.R. § 122.45[c]). Since the water quality objectives for metals are typically expressed as dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR contains default translators; however, site-specific conditions, such as water temperature, pH, total suspended solids, and organic carbon may affect the form of metal (dissolved, non-filterable, or otherwise) present and therefore available to cause toxicity. In general, dissolved metals are more available and more toxic to aquatic life than other forms. Site-specific translators can account for site-specific conditions, thereby preventing overly stringent or under-protective water quality objectives. The Discharger has not developed site-specific translators so this Order uses the CTR default translators for all metals.

3. Need for Water Quality-Based Effluent Limitations (Reasonable Potential Analysis)

Assessing whether a pollutant has reasonable potential to exceed a water quality objective is the fundamental step in determining whether a WQBEL is required. The discussion below relates to Discharge Point No. 001. Provision VI.C.4 contains narrative WQBELs for Discharge Point No. 002.

a. Available Information. The reasonable potential analysis for this Order is based on effluent monitoring data the Discharger collected from September 2011 through December 2015 and ambient background data the RMP collected at the Sacramento (BG20) and San Joaquin (BG30) from 1993 through 2015. SIP section 1.4.3 requires that background water quality data be representative of the ambient receiving water that will mix with the discharge. RMP monitoring stations BG20 and BG30, relative to other RMP stations, fits SIP guidance for establishing background conditions at Discharge Point No. 001.

In some cases, reasonable potential cannot be determined because effluent data are limited or ambient background concentrations are unavailable. Provision VI.C.2 of the Order requires the Discharger to continue monitoring for these constituents in its effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further analysis will be conducted to determine whether numeric effluent limitations are necessary.

This Order does not contain WQBELs for constituents that do not demonstrate reasonable potential; however, Provision VI.C.2 of the Order still requires monitoring for those pollutants. If concentrations are found to have increased significantly, Provision VI.C.2 of the Order requires the Discharger to investigate the sources of the increases and implement remedial measures if the increases pose a threat to receiving water quality.

b. Priority Pollutants

i. Methodology. SIP section 1.3 sets forth the methodology used for this Order for assessing whether a priority pollutant has reasonable potential to exceed a water quality objective. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentration (B). SIP section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential:

(a) Trigger 1 is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality objective (MEC $\geq$ water quality objective).

(b) Trigger 2 is activated if the ambient background concentration observed in the receiving water is greater than the lowest applicable water quality objective (B > water quality objective) *and* the pollutant is detected in any effluent sample.

(c) Trigger 3 is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

ii. Analysis. The maximum effluent concentrations, most stringent applicable water quality criteria and objectives, and ambient background concentrations used in the analysis are presented in the following table, along with the reasonable potential analysis results (yes, no, or unknown) for each pollutant. Reasonable potential was not determined for all pollutants because there are not water quality objectives for all pollutants and monitoring data are unavailable for others.

Copper, cyanide, carbon tetrachloride, pentachlorophenol, and 3,3-dichlorobenzidine exhibit reasonable potential by Trigger 1. Nickel exhibits reasonable potential by trigger 2. Basin Plan sections 7.2.1.2 and 4.7.2.2 also require copper and cyanide WQBELs.

Table F-7. Reasonable Potential Analysis

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or Minimum DL (µg/L) [1][2]	B or Minimum DL (µg/L) [1][2]	RPA Results [3]
1	Antimony	6.0	0.89	Unavailable	No
2	Arsenic	10	1.3	0.063	No
3	Beryllium	4.0	<0.07	Unavailable	U
4	Cadmium	1.2	0.41	0.066	No
5a	Chromium (III)	50	3.9	Unavailable	No
5b	Chromium (VI)	10	0.88	Unavailable	No
6	**Copper**	**6.3**	**7.7**	**66**	**Yes**
7	Lead	3.3	1.1	2.3	No
8	Mercury	---	---	---	[4]
9	**Nickel**	**12**	**7.0**	**22**	**Yes**
10	Selenium	---	---	---	[4]
11	Silver	2.2	<0.04	0.057	No
12	Thallium	1.7	<0.04	Unavailable	No
13	Zinc	86	20	18	No
14	**Cyanide**	2.9	2.9	**0.9**	**Yes**
15	Asbestos	No Criteria	Not Available	Unavailable	U
16	2,3,7,8-TCDD	1.30E-08	<1.8E-06	<0.00000001	U
17	Acrolein	320	<2.5	Unavailable	No
18	Acrylonitrile	0.059	<1.0	Unavailable	U
19	Benzene	1.0	<0.051	Unavailable	No
20	Bromoform	4.3	0.41	Unavailable	No
21	**Carbon Tetrachloride**	**0.25**	**0.73** [5]	Unavailable	**Yes**
22	Chlorobenzene	70	<0.05	Unavailable	No
23	Chlorodibromomethane	0.40	0.30	Unavailable	No
24	Chloroethane	No Criteria	<0.25	Unavailable	U
25	2-Chloroethylvinyl ether	No Criteria	<0.50	Unavailable	U
26	Chloroform	No Criteria	<0.12	Unavailable	U
27	Dichlorobromomethane	0.56	<0.2	Unavailable	No

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or Minimum DL (µg/L) [1][2]	B or Minimum DL (µg/L) [1][2]	RPA Results [3]
28	1,1-Dichloroethane	5.0	<0.06	Unavailable	No
29	1,2-Dichloroethane	0.38	<0.09	Unavailable	No
30	1,1-Dichloroethylene	0.057	<0.086	Unavailable	No
31	1,2-Dichloropropane	0.52	<0.055	Unavailable	No
32	1,3-Dichloropropylene	0.50	<0.71	Unavailable	U
33	Ethylbenzene	300	<0.05	Unavailable	No
34	Methyl Bromide	48	<0.16	Unavailable	No
35	Methyl Chloride	No Criteria	0.2	Unavailable	U
36	Methylene Chloride	4.7	<0.20	Unavailable	No
37	1,1,2,2-Tetrachloroethane	0.17	<0.11	Unavailable	No
38	Tetrachloroethylene	0.80	0.33	Unavailable	No
39	Toluene	150	<0.068	Unavailable	No
40	1,2-Trans-Dichloroethylene	10	<0.06	Unavailable	No
41	1,1,1-Trichloroethane	200	<0.05	Unavailable	No
42	1,1,2-Trichloroethane	0.60	<0.08	Unavailable	No
43	Trichloroethylene	2.7	<0.06	Unavailable	No
44	Vinyl Chloride	0.50	<0.07	Unavailable	No
45	2-Chlorophenol	120	<0.26	Unavailable	No
46	2,4-Dichlorophenol	93	<0.28	Unavailable	No
47	2,4-Dimethylphenol	540	<0.098	Unavailable	No
48	2-Methyl- 4,6-Dinitrophenol	13	<0.2	Unavailable	No
49	2,4-Dinitrophenol	70	<0.87	Unavailable	No
50	2-Nitrophenol	No Criteria	<1.4	Unavailable	U
51	4-Nitrophenol	No Criteria	<1.7	Unavailable	U
52	3-Methyl 4-Chlorophenol	No Criteria	<0.27	Unavailable	U
53	**Pentachlorophenol**	**0.28**	**2.4** [5]	Unavailable	**Yes**
54	Phenol	21,000	30	Unavailable	No
55	2,4,6-Trichlorophenol	2.1	<0.23	Unavailable	No
56	Acenaphthene	1200	0.003	Unavailable	No
57	Acenaphthylene	No Criteria	0.0074	Unavailable	U
58	Anthracene	9600	<0.002	Unavailable	No
59	Benzidine	0.00012	<0.29	Unavailable	U
60	Benzo(a)Anthracene	0.0044	<0.003	0.0015	No
61	Benzo(a)Pyrene	0.0044	<0.002	0.0011	No
62	Benzo(b)Fluoranthene	0.0044	<0.003	0.0019	No
63	Benzo(ghi)Perylene	No Criteria	<0.003	Unavailable	U
64	Benzo(k)Fluoranthene	0.0044	<0.003	Unavailable	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	<0.3	Unavailable	U
66	Bis(2-Chloroethyl)Ether	0.031	<0.24	Unavailable	No
67	Bis(2-Chloroisopropyl)Ether	1400	<0.28	Unavailable	No
68	Bis(2-Ethylhexyl)Phthalate	1.8	0.93	Unavailable	No
69	4-Bromophenyl Phenyl Ether	No Criteria	<0.2	Unavailable	U
70	Butylbenzyl Phthalate	3000	<0.29	Unavailable	No

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or Minimum DL (µg/L) [1][2]	B or Minimum DL (µg/L) [1][2]	RPA Results [3]
71	2-Chloronaphthalene	1700	<0.25	Unavailable	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	<0.17	Unavailable	U
73	Chrysene	0.0044	<0.002	0.0012	No
74	Dibenzo(a,h)Anthracene	0.0044	<0.002	0.00067	No
75	1,2-Dichlorobenzene	600	<0.08	Unavailable	No
76	1,3-Dichlorobenzene	400	<0.071	Unavailable	No
77	1,4-Dichlorobenzene	5	<0.072	Unavailable	No
78	**3,3 Dichlorobenzidine**	**0.04**	**0.44** [5]	Unavailable	**Yes**
79	Diethyl Phthalate	23,000	<0.15	Unavailable	No
80	Dimethyl Phthalate	313,000	<0.18	Unavailable	No
81	Di-n-Butyl Phthalate	2700	<0.3	Unavailable	No
82	2,4-Dinitrotoluene	0.11	<0.17	Unavailable	U
83	2,6-Dinitrotoluene	No Criteria	<0.2	Unavailable	U
84	Di-n-Octyl Phthalate	No Criteria	0.66	Unavailable	U
85	1,2-Diphenyhydrazine	0.04	<0.16	Unavailable	U
86	Fluoranthene	300	0.0031	0.0036	No
87	Fluorene	1300	<0.003	0.0074	No
88	Hexachlorobenzene	0.00075	<0.18	0.000081	U
89	Hexachlorobutadiene	0.44	<0.24	Unavailable	No
90	Hexachlorocyclopentadiene	50	<1.2	Unavailable	No
91	Hexachloroethane	1.9	<0.29	Unavailable	No
92	Indeno(1,2,3-cd)Pyrene	0.0044	<0.003	0.0037	No
93	Isophorone	8.4	<0.32	Unavailable	No
94	Naphthalene	No Criteria	<0.23	0.012	U
95	Nitrobenzene	17	<0.32	Unavailable	No
96	N-Nitrosodimethylamine	0.00069	<0.74	Unavailable	U
97	N-Nitrosodi-n-Propylamine	0.005	<0.35	Unavailable	U
98	N-Nitrosodiphenylamine	5.0	<0.18	Unavailable	No
99	Phenanthrene	No Criteria	0.13	0.0026	U
100	Pyrene	9600	<0.001	0.016	No
101	1,2,4-Trichlorobenzene	5.0	<0.23	Unavailable	No
102	Aldrin	0.00013	<0.00028	0.000011	U
103	Alpha-BHC	0.0039	<0.003	Unavailable	No
104	Beta-BHC	0.014	<0.00069	Unavailable	No
105	Gamma-BHC	0.019	<0.0002	Unavailable	No
106	Delta-BHC	No Criteria	<0.0001	Unavailable	U
107	Chlordane	0.00057	<0.002	Unavailable	U
108	4,4'-DDT	0.00059	<0.00017	Unavailable	No
109	4,4'-DDE	0.00059	<0.00018	Unavailable	No
110	4,4'-DDD	0.00083	<0.00011	Unavailable	No
111	Dieldrin	0.00014	<0.0001	0.00038	No
112	Alpha-Endosulfan	0.0087	<0.00011	0.00017	No
113	Beta-Endosulfan	0.0087	<0.00046	0.000042	No

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or Minimum DL (µg/L) [1][2]	B or Minimum DL (µg/L) [1][2]	RPA Results [3]
114	Endosulfan Sulfate	110	<0.0003	0.00028	No
115	Endrin	0.0023	<0.00021	0.00022	No
116	Endrin Aldehyde	0.76	<0.0005	Unavailable	No
117	Heptachlor	0.00021	<0.0004	0.000016	No
118	Heptachlor Epoxide	0.00011	<0.00025	0.00017	No
119-125	PCBs sum [4]	0.00017	<0.000001	Unavailable	No
126	Toxaphene	0.0002	<0.0002	<0.00000034	No

Footnotes:

[1] The maximum effluent concentration and ambient background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum detection level (DL).

[2] The maximum effluent concentration or ambient background concentration is "unavailable" when there are no monitoring data for the constituent.

[3] RPA Results = Yes, if MEC ≥ WQC, B > WQC and MEC is detected, or Trigger 3
= No, if MEC and B are < WQC or all effluent data are undetected
= Unknown (U) if no criteria have been promulgated or data are insufficient.

[4] SIP section 1.3 excludes from its reasonable potential analysis procedure priority pollutants for which a TMDL has been developed. TMDLs have been developed for mercury and PCBs in San Francisco Bay. Mercury and PCBs from wastewater discharges are regulated by NPDES Permit No. CA0038849, which implements the San Francisco Bay Mercury and PCBs TMDLs. A TMDL has also been developed for selenium in North San Francisco Bay. The TMDL allocates an annual load of 4.5 kg/year to the Discharger. (Basin Plan Amendment, Table 7.2.4-4.) Because this load calculation reflects current discharge, the Discharger is not required to have a numeric effluent limitation for selenium. Instead, the Discharger must continue monitoring its selenium discharge over the course of the permit term to assure compliance with the load allocation.

[5] Value not quantified (DNQ or J-flagged), but detection limit is about the water quality objective.

c. Whole Effluent Acute Toxicity. Basin Plan section 4.5.5.3.1 requires acute toxicity monitoring and limitations, implying there is reasonable potential for the discharge to cause or contribute to exceedances of the acute toxicity water quality objective.

d. Whole Effluent Chronic Toxicity. Basin Plan section 3.3.18 states, "There shall be no chronic toxicity in ambient waters. Chronic toxicity is a detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community."

The Discharger's quarterly chronic toxicity tests from November 2011 through February 2016 were mostly below 1 TU_c, but high levels were occasionally observed. The highest result was 9.7 TU_c in May 2016. Therefore, there is reasonable potential for chronic toxicity in the receiving water to exceed the toxicity objective, and a WQBEL is required.

e. Temperature. Temperature objectives for enclosed bays and estuaries are as specified in the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays of California* (the Thermal Plan). In addition, Basin Plan

section 3.3.17 requires that the natural receiving water temperature of inland surface waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. The Thermal Plan requires the following:

- The maximum temperature not exceed the natural receiving water temperature by more than 20ºF;
- Elevated temperature waste discharges, either individually or combined with other discharges, not create a zone, defined by water temperatures of more than 1ºF above the natural receiving water temperature, that exceeds 25 percent of the cross-sectional area of the main river channel at any point;
- No discharge is to cause a surface water temperature rise greater than 4ºF above the natural receiving water at any time or place; and
- The maximum temperature of the thermal waste discharge not exceed 86ºF.

In November 1976, the Regional Water Board granted the Discharger exemptions to the Thermal Plan (Resolution No. 76-16). The State Water Board approved the exemptions in December 1979 (Resolution No. 79-108). These resolutions were based on the Discharger's June 1973 Thermal Study, which concluded that elevated temperatures do not adversely affect beneficial uses. In recent years, the Regional Water Board directed the Discharger to investigate the size, strength, and impacts of the thermal plume to reassess the 1973 Thermal Study conclusions.

The Discharger's January 2009 technical memorandum defined the size and strength of the thermal plume by measuring temperatures around the outfall during ebb, slack, and flood tides on two days (one in June 2007 and one in September 2007). The Discharger then conducted an assessment of the biological impacts of the thermal plume as summarized in its May 2014 Thermal Plume Evaluation Study. The study concluded that there would be no significant biological impacts as a result of the thermal plume. While the study acknowledges that temperatures within the plume are above temperatures that could affect delta smelt (a federally-endangered species), it concluded that the thermal plume will not affect delta smelt because the volume of water that experiences temperatures elevated above the upper thermal limit of the fish species that could be found at the site is very small relative to the volume of water in New York Slough.

The studies also showed that the plume is located only in the very shallow area adjacent to the shoreline where the discharge occurs and does not extend into the deep waters of New York Slough. Delta smelt prefer deep water habitats, so it is unlikely that delta smelt or other species will be affected by the thermal plume.

While the discharge is located near prime delta smelt habitat, these studies indicate that the thermal plume will not affect beneficial uses. Therefore, discontinuing the 1976 resolution exempting the Discharger from the Thermal Plan is not warranted at this time. However, treatment technologies for reducing temperature have evolved since the Facility was constructed. Technologies that are both economically and technically feasible may be available to reduce the volume or temperature of the thermal plume and thereby reduce the potential threat to endangered species. Provision VI.C.5 of this Order requires the Discharger to evaluate options for reducing its thermal discharge to ensure

that it implements technological controls consistent with the standards outlined in 40 C.F.R. section 125.3(d).

f. Sediment Quality. Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. Efforts are underway to identify stressors causing such conditions. However, to date there is no evidence directly linking compromised sediment conditions to the discharges subject to this Order; therefore, the Regional Water Board cannot draw a conclusion about reasonable potential for these discharges to cause or contribute to exceedances of the sediment quality objectives. Nevertheless, the Discharger continues to participate in the RMP, which monitors San Francisco Bay sediment and seeks to identify stressors responsible for degraded sediment quality. Thus far, the monitoring has provided only limited information about potential stressors and sediment transport. The Regional Water Board is exploring options for obtaining additional information that may inform future analyses.

g. **Dioxin-TEQ**. TEFs and BEFs are used to express measured concentrations of 16 dioxin congeners in effluent and background samples as equivalent 2,3,7,8-TCDD concentrations. For each sample, the sum of these equivalent concentrations is the dioxin-TEQ concentration. All samples were non-detects. This Order establishes dioxin-TEQ WQBELs because the ambient background receiving water dioxin TEQ concentration (5.3×10^{-8} µg/L) exceeds the CTR numeric criterion for 2,3,7,8-TCDD (1.4×10^{-8} µg/L), and dioxins are a known pollutant of concern for the Region and often identified within wastewater treatment effluent. This is comparable to Trigger 3 in the SIP methodology. Therefore, there is reasonable potential that dioxin-TEQ in the discharge could cause or contribute to exceedance of the bioaccumulation water quality objective, and WQBELs are needed to protect against potential toxic impacts. WQBELs also avoid backsliding.

4. Water Quality-Based Effluent Limitations (WQBELs)

WQBELs were developed for the pollutants determined to have reasonable potential to cause or contribute to exceedances of water quality objectives at Discharge Point No. 001. The WQBEL calculations are based on the procedures specified in SIP section 1.4, which are required for priority pollutants. SIP section 1.4 is used as guidance for dioxin-TEQ and chronic toxicity. Provision VI.C.4 contains narrative WQBELs for Discharge Point No. 002.

a. Dilution Credits. Basin Plan Section 4.7.2.2 specifies a dilution credit of D=2.25 for cyanide. Basin Plan section 4.5.5.3.2 also allows dilution credits for chronic toxicity comparable to those allowed for chemical pollutants. While chronic toxicity is not a CTR pollutant subject to the SIP, the Order uses the guidance in SIP section 1.4.2 for establishing a basis for a mixing zone.

This Order establishes a mixing zone for chronic toxicity that is about a 50-foot semicircle around the discharge outfall. The Discharger's 1994 CORMIX dilution model estimated that the dilution ratio at the edge of this mixing zone is at least 4:1 at slack tide. This represents worst-case conditions because dilution is greater with tidal currents. This mixing zone meets SIP section 1.4.2.2.A requirements because it will not do any of the following:

i. **Compromise the integrity of the water body.** The mixing zone will not compromise the integrity of the receiving waters because it is small relative to the size of New York Slough. The mixing zone extends 50 feet from the shore, while the slough is about 850 feet wide.

ii. **Cause acute toxicity to aquatic life passing through the mixing zone.** The mixing zone applies only to chronic toxicity, not acute toxicity. Acutely toxic conditions will not exist inside the mixing zone because this Order contains acute toxicity effluent limits and requires acute toxicity testing to demonstrate compliance. These limits do not account for any dilution; therefore, compliance with these limits protects areas within the mixing zones. Bioassay monitoring conducted on rainbow trout during the past permit cycle showed high survival rates (see Table F-2), indicating that organisms passing through the mixing zone are unlikely to experience acute toxicity.

iii. **Restrict the passage of aquatic life.** The mixing zone will not restrict the passage of aquatic life because the mixing zone is small compared to the size of the slough at the discharge location. The mixing zone extends about 50 feet from the bank into a channel that is 850 feet wide. Aquatic organisms can easily pass around the mixing zone and avoid exposure to chronic toxicity.

iv. **Adversely affect biologically sensitive or critical habitats, including, but not limited to, habitats of species under federal or State endangered species laws.** New York Slough has three potential species of concern in the area. Steelhead (*Oncorhyncus mykiss irideus*), a federally-listed threatened species, are known to pass through New York Slough as they migrate between the ocean and their spawning habitat in freshwater rivers. Steelhead may take in pollutants through their gills as they pass through the mixing zone, but, because the mixing zone extends only 50 feet from the bank, steelhead are unlikely to reside within the mixing zone for a duration that would adversely affect them. Delta smelt (*Hypomesus transpacificus*) is a federally-listed endangered species, and longfin smelt (*Spirinchus thaleichthys*) is a State-listed threatened species. Similarly, it is unlikely that delta smelt and longfin smelt would inhabit the relatively small mixing zone long enough to be affected by chronic toxicity.

v. **Produce undesirable or nuisance aquatic life.** The mixing zone will not produce undesirable or nuisance conditions to aquatic life because this Order imposes receiving water limitations that prohibit bottom deposits or aquatic growths that cause nuisance or adversely affect beneficial uses.

vi. **Result in floating debris, oil, or scum.** The mixing zone applies only to chronic toxicity. It will not result in floating debris, oil, or scum because the effluent receives treatment to eliminate oils, grease, debris, and scum. This Order also imposes receiving water limitations that prohibit floating debris, oil, or scum at any place and at any time.

vii. **Produce objectionable color, odor, taste, or turbidity.** The mixing zone applies only to chronic toxicity. It will not produce objectionable color, odor, taste, or turbidity. The effluent receives treatment prior to discharge, and the treatment process

produces effluent free of color, odor, and turbidity. This Order prohibits alteration of color or turbidity beyond natural background levels.

viii. Cause objectionable bottom deposits. The mixing zone will not cause objectionable bottom deposits because the effluent receives treatment and is free of settleable solids. In addition, this Order prohibits bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses.

ix. Cause nuisance. The mixing zone will not cause a nuisance because the effluent receives treatment, and this Order prohibits discharges from causing a nuisance. Water Code section 13050(m) defines nuisance to mean anything that meets all three of the following criteria:

- is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property;
- affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and
- occurs during, or as a result of, the treatment or disposal of wastes.

x. Dominate the receiving water body or overlap a mixing zone from a different outfall. The mixing zone will not overlap any other mixing zone because the Regional Water Board has not established any other mixing zone nearby.

xi. Be located at or near any drinking water intake. The mixing zone will not be located at or near a drinking water intake because there are no drinking water intakes near the outfall.

In compliance with SIP section 1.4.2.2.B, the mixing zone protects beneficial uses and complies with regulatory requirements. New York Slough has strong tidal currents that flush and dilute pollutants downstream so organisms will not likely be exposed to pollutants concentrations that could cause chronic toxicity.

SIP section 1.4.2.2 requires mixing zones to be as small as practicable. To ensure that the chronic toxicity mixing zone is as small as possible, the size was based on the Discharger's dilution model. The model indicates that 4:1 dilution (D = 3) will result in a small mixing zone (about 4000 square feet in area).

b. Copper Intake Credits. SIP section 1.4.4. allows intake credits when the below conditions are met. Each listed requirement is followed by an evaluation in *italics*.

- The background concentration and the intake water concentration exceed the water quality objective.

  The maximum observed background copper concentration is 66 µg/L, which is greater than the lowest water quality objective of 6.3.

- The intake credits are consistent with any applicable TMDL.

  There is no copper TMDL for New York Slough or the Sacramento-San Joaquin Delta.

- The intake water is from the same water body as the receiving water;

  The intake and discharge are both within the Sacramento-San Joaquin Delta. About 40 percent of the intake water is from New York Slough about 1600 feet from the discharge location. The remaining 60 percent is from the Contra Costa Canal. Water in the Contra Costa Canal originates from the Sacramento-San Joaquin Delta about 10 miles east of the Facility.

- The Facility does not alter the intake water chemically or physically in a manner that adversely affects water quality beneficial uses.

  Copper is not used in any Facility process. The Discharger does not alter the intake water chemically or physically in a manner that would alter intake copper.

- The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

  Effluent copper concentrations are typically lower than receiving water concentrations. Therefore, the timing and location of the discharge of copper will not affect water quality or beneficial uses.

Because the above conditions are met, the Regional Water Board may allow effluent limits that account for the intake water copper concentration. The Discharger may add copper to the waste stream as long as it removes at least the same amount of copper prior to discharge.

From September 2011 through December 2015, the average intake copper concentration was 4.2±6.4 µg/L and the maximum was 66 µg/L. During the same period, the average effluent copper concentration was 2.2±1.3 µg/L and the maximum was 7.7 µg/L. While the treatment plant removes some copper, the effluent concentrations can occasionally exceed effluent limits because of high intake concentrations. This Order allows a copper intake credit of 16 µg/L. This represents the 99th percentile of the intake copper concentration. Concentrations above this 16 µg/L are statistically greater than the intake concentration and do not qualify for intake credits.

c. WQBEL Calculations. For those pollutants with reasonable potential, average monthly effluent limitations (AMELs) and maximum daily effluent limitations (MDELs) were calculated as shown in the table below:

Table F-8. WQBEL Calculations

PRIORITY POLLUTANTS	Cyanide	Copper	Nickel	Dioxin-TEQ	Carbon Tetra-chloride	Penta-chloro-phenol	3,3-Dichloro-benzidine	Chronic Toxicity
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	TUc
Basis and Criteria type	Basin Plan SSO	Basin Plan SSO	Basin Plan and CTR aquatic life	CTR HH	CTR HH	CTR HH	CTR HH	Basin Plan
Criteria -Acute	-----	-----	63	----	-----	-----	-----	-----
Criteria -Chronic	-----	-----	12	-----	-----	-----	-----	1.0
HH criteria	2.2E+05	1300	46000	1.3E-08	0.25	0.28	0.04	-----
Site-Specific Objective Criteria -Acute	9.4	9.8	-----	-----	-----	-----	-----	-----
Site-Specific Objective Criteria -Chronic	2.9	6.3	-----	----	-----	-----	-----	-----
Water Effects ratio (WER)	1	1	1	1	1	2.4	1	1
Lowest WQO	2.9	6.3	12	1.3E-08	0.25	0.28	0.04	1
Site-Specific Translator - MDEL	-----	-----	-----	----	-----	-----	-----	-----
Site-Specific Translator - AMEL	-----	-----	-----	----	-----	-----	-----	-----
Dilution Factor (D)	2.25	0	0	0	2.25	0	0	3
No. of samples per month	4	4	4	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	N	N	Y	Y	N	Y
HH criteria analysis required? (Y/N)	Y	Y	Y	Y	Y	N	Y	N
Background (Maximum Conc for Aquatic Life calc)	0.90	9.9	21.8	----	-----	-----	-----	-----
Background (Average Conc for Human Health calc)	0.90	9.9	21.8	----	-----	-----	-----	-----
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N	N	N	Y	N	N	N	N
ECA acute	85.9	9.8	62.5	----	-----	-----	-----	-----
ECA chronic	20.9	6.3	11.9	----	-----	-----	-----	4.0
ECA HH	2.2E+06	1300	4600	1.3E-08	0.25	200	0.031	-----

PRIORITY POLLUTANTS	Cyanide	Copper	Nickel	Dioxin-TEQ	Carbon Tetra-chloride	Penta-chloro-phenol	3,3-Dichloro-benzidine	Chronic Toxicity
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	TUc
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	N	N	N	Y	Y	Y	Y	N
Avg of effluent data points	0.48	0.08	0.25	----	-----	-----	-----	-----
Std Dev of effluent data points	0.43	0.02	0.17	----	-----	-----	-----	-----
CV calculated	0.90	0.23	0.68	----	-----	-----	-----	-----
CV (Selected) - Final	0.90	0.23	0.68	0.6	0.6	0.6	0.6	0.6
ECA acute mult99	0.23	0.61	0.29	----	-----	-----	-----	0.32
ECA chronic mult99	0.41	0.78	0.49	----	-----	-----	-----	0.53
LTA acute	19.3	6.0	18	----	-----	-----	-----	-----
LTA chronic	8.5	4.8	5.8	----	-----	-----	-----	2.1
minimum of LTAs	8.5	4.8	5.8	----	-----	-----	-----	2.1
AMEL mult95	1.8	1.2	1.6	1.6	1.6	1.6	1.6	1.6
MDEL mult99	4.4	1.6	3.5	3.1	3.1	3.1	3.1	3.1
AMEL (aquatic life)	16	6.0	10	----	-----	-----	-----	3.0
MDEL(aquatic life)	38	8.0	20	----	-----	-----	-----	7.0
MDEL/AMEL Multiplier	1.72.4	1.4	2.1	2.0	2.0	2.0	2.0	2.0
AMEL (human health)	2.2E+06	13000	4600	1.3E-08	0.25	0.28	0.04	-----
MDEL (human health)	5.3E+06	18000	9800	2.6E-08	0.50	0.56	0.08	-----
minimum of AMEL for Aq. life vs HH	16	6.0	10	1.3E-08	0.25	0.28	0.04	3.3
minimum of MDEL for Aq. Life vs HH	38	8.0	20	2.6E-08	0.50	0.56	0.08	6.6
Previous order limit - AMEL	6.8	3.3	7.3	1.3E-08	0.25	-----	-----	4.0
Previous order limit - MDEL	14	5.5	12	2.6E-08	0.50	-----	-----	8.0
Final limit - AMEL	6.8	3.3	7.3	1.3E-08	0.25	0.28	0.04	3.3
Final limit - MDEL	14	5.5	12	2.6E-08	0.50	0.56	0.08	6.6

5. Whole Effluent Acute Toxicity

This Order contains whole effluent acute toxicity effluent limitations based on Basin Plan Table 4-3.

D. Discharge Requirement Considerations

1. **Anti-backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(l), which generally require effluent limitations in a reissued permit to be as stringent as those in the previous permit. For all effluent limits included in this Order, the requirements are at least as stringent as those in the previous order.

   This Order does not retain WQBELs for aldrin and cadmium from the previous order because data no longer indicate reasonable potential for these pollutants to exceed WQOs. This is consistent with State Water Board Order WQ 2001-16. Finally, this Order does not retain the settleable solids limits from the previous order because the Basin Plan has been amended to remove those limits for treatment facilities.

2. **Antidegradation.** This Order complies with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16. It authorizes the same volume of discharge as the previous order, which is the baseline by which to measure whether degradation will occur. This Order does not allow for an increase in flow, a reduced level of treatment, or less stringent effluent limitations relative to those in the previous order.

3. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and WQBELs for individual pollutants. The technology-based requirements implement minimum, applicable federal technology-based requirements. In addition, this Order contains more stringent effluent limitations as necessary to meet water quality standards. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement CWA requirements.

   This Order's WQBELs have been derived to implement water quality objectives that protect beneficial uses. The beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating these WQBELs are based on the CTR, as implemented in accordance with the SIP, which U.S. EPA approved on May 18, 2000. U.S. EPA approved most Basin Plan beneficial uses and water quality objectives prior to May 30, 2000. Beneficial uses and water quality objectives submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). U.S. EPA approved the remaining beneficial uses and water quality objectives so they are applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in sections V.A and V.B of the Order are based on Basin Plan narrative and numeric water quality objectives. The receiving water limitation in section V.C of the

Order requires compliance with federal and State water quality standards in accordance with the CWA and regulations adopted thereunder.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Attachment D contains standard provisions that apply to all NPDES permits in accordance with 40 C.F.R. section 122.41 and additional conditions applicable to specific categories of permits in accordance with 40 C.F.R. section 122.42. The Discharger must comply with these provisions. The conditions set forth in 40 C.F.R. sections 122.41(a)(1) and (b) through (n) apply to all state-issued NPDES permits and must be incorporated into permits either expressly or by reference.

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. Attachment G contains standard provisions that supplement the federal standard provisions in Attachment D. This Order omits the federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the State's enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

B. Monitoring and Reporting

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. For more background regarding these requirements, see Fact Sheet section VII.

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.62 and 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new and relevant information that may become available in the future and other circumstances as allowed by law.

2. Effluent Characterization Study and Report.

This Order does not include effluent limitations for priority pollutants that do not demonstrate reasonable potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the MRP and Attachment G. Monitoring data are necessary to verify that the "no" and "unknown" reasonable potential analysis conclusions of this Order remain valid. This requirement is authorized pursuant to CWC section 13267 and is necessary to inform the next permit reissuance and to ensure that the Discharger takes timely steps in response to any unanticipated change in effluent quality during the term of this Order.

3. Pollutant Minimization Program

This provision is based on Basin Plan section 4.13.2 and SIP section 2.4.5.

4. Stormwater Management

This provision is based on Basin Plan section 4.8 and 40 C.F.R. part 122.44(k), which requires permits to establish BMPs to control or abate the discharge of pollutants in stormwater runoff when numeric limits are infeasible. These requirements serve as narrative WQBELs.

The BMP requirements are the same as those set forth in General Permit for Stormwater Discharges Associated with Industrial Activities, NPDES General Permit No. CAS000001 (State Water Board Order No. 2014-0057-DWQ), sections X, XI, and XV and are consistent with requirements required for metal finishing activities (SIC code 3316).

This provision sets forth action levels the Discharger must use to evaluate the effectiveness of its BMPs in reducing or preventing pollutant discharges. The Discharger must review and, if possible, improve its BMPs if any action level is exceeded. The pH action level is based on the water quality objective in Basin Plan section 3.3.9. All other action levels are based on Table 2 of State Water Board Order No. 2014-0057-DWQ.

5. Thermal Discharge Reduction Evaluation Report

This provision is required to ensure that the Discharger, based on site-specific conditions, implements appropriate technological controls to reduce thermal discharges. This Order requires that the Discharger identify options to reduce the temperature of its discharges to 86ºF or below and evaluate the economic and technical feasibility of implementing these options. Technologies evaluated must be consistent with the performance standards set forth in 40 C.F.R. section 125.3(d).

6. Copper Action Plan

This provision is based on Basin Plan section 7.2.1.2 and is necessary to ensure that use of copper site-specific objectives is consistent with antidegradation policies. The Discharger submitted an inventory of potential copper sources on March 1, 2011. This Order requires the Discharger to implement pretreatment, source control, and pollution prevention for identified sources. No significant copper sources were found. Additional actions may be necessary depending on the three-year rolling mean dissolved copper concentration in Central or Lower San Francisco Bay. Data the San Francisco Estuary Institute compiled for 2010-2013 indicate no degradation of San Francisco Bay water quality with respect to copper (http://www.sfei.org/content/copper-site-specific-objective-3-year-rolling-averages).

7. Cyanide Action Plan

This provision is based on Basin Plan section 4.7.2.2. It is necessary to ensure that use of cyanide site-specific objectives is consistent with antidegradation policies.

VII. RATIONALE FOR MONITORING AND REPORTING PROGRAM (MRP)

Attachment E contains the MRP for this Order. It specifies sampling stations, pollutants to be monitored (including all parameters for which effluent limitations are specified), monitoring frequencies, and reporting requirements. The following provides the rationale for these requirements:

A. MRP Requirements Rationale

1. **Influent Monitoring.** Influent copper monitoring is required to determine if intake credits apply. Basin Plan section 4.7.2.2 requires cyanide monitoring because this Order is based on site-specific cyanide water quality objectives.

2. **Effluent Monitoring.** Effluent monitoring is necessary to evaluate compliance with effluent limits and to understand Facility operations.

3. **Whole Effluent Toxicity Testing**. Acute and chronic whole effluent toxicity tests are necessary to evaluate compliance with the acute toxicity effluent limitations and to conduct future reasonable potential analyses. Chronic toxicity tests are also necessary to evaluate whether chronic toxicity exceeds the triggers for accelerated monitoring and Toxicity Reduction Evaluations based on Basin Plan sections 4.5.5.3.2 and 4.5.5.3.3 and Basin Plan Table 4-5.

   For shallow water dischargers, Basin Plan Table 4-5 establishes conditions requiring accelerated monitoring when the routine monitoring is quarterly. These conditions are triggered when the discharge exceeds the effluent limits (3.3 TUc is exceeded as a monthly average or when 6.6 TUc is exceeded as a daily maximum).

   Red abalone (*Haliotis rufescens*) will be used for routine chronic toxicity monitoring because the Discharger's July 2016 chronic toxicity screening study recommended this species as the most appropriate. Consistent with Basin Plan section 4.5.5.3.4, the Discharger is required to conduct a chronic toxicity screening phase study, as described in MRP Appendix E-1, prior to permit reissuance.

4. **Receiving Water Monitoring.** Receiving water monitoring is required to perform reasonable potential analyses and to calculate effluent limits. The Discharger contributes funding to the RMP, which performs regional receiving water monitoring for the Sacramento/San Joaquin Delta.

B. Monitoring Requirements Summary.

The table below summarizes routine monitoring requirements. This table is for informational purposes only. The actual requirements are specified in the MRP and elsewhere in this Order.

Table F-9. Monitoring Requirements Summary

Parameter	Influent INF-001	Effluent EFF-001	Stormwater EFF-002	Receiving Water
Flow	---	Continuous/D	---	---
Volume	---	---	1/Day [1]	---
TSS	---	1/Month	1/Day [1]	---
Oil and Grease	---	1/Quarter	1/Day [1]	---

Parameter	Influent INF-001	Effluent EFF-001	Stormwater EFF-002	Receiving Water
pH	---	1/Day	1/Day [1]	---
Temperature	---	1/Day	---	---
Hardness	---	---	---	---
Acute Toxicity	---	1/2 Weeks	---	---
Chronic Toxicity	---	1/Quarter	---	---
Copper, Total Recoverable	1/Month	1/Month	---	Support RMP
Cyanide, Total	1/Year	1/Quarter	---	Support RMP
Nickel, Total	---	1/Quarter	---	Support RMP
Dioxin-TEQ	---	1/Year	---	Support RMP
Carbon tetrachloride,	---	2/Year	---	Support RMP
Pentachlorophenol	---	2/Year	---	Support RMP
3,3-Dichlorobenzidine	---	2/Year	---	Support RMP
Lead, Total	---	1/Year	---	Support RMP
Zinc, Total	---	1/Year	1/Day [1]	Support RMP
Aluminum, Total	---	---	1/Day [1]	---
Cadmium, Total	---	1/Year	---	Support RMP
Chromium, Total	---	1/Year	---	Support RMP
Silver, Total	---	1/Year	---	Support RMP
Naphthalene	---	1/Year	---	Support RMP
Tetrachloroethylene	---	1/Year	---	Support RMP
Total Toxic Organics	---	1/Year	---	Support RMP
Other Priority Pollutants	---	1/Year	Once	Support RMP

Sampling Frequencies:

Continuous/D = measured continuously, and recorded and reported daily
1/Day = once per day
1/Week = once per week while discharge occurs
3/Week = three times per week
1/Month = once per month
1/Quarter = once per quarter
1/Year = once per year
2/Year = twice per year
1/5 Years = once per five years

Footnote:

[1] The Discharger shall sample significant stormwater discharges (continuous discharges for a minimum of one hour, or an intermittent discharge for a minimum of three hours over a 12 hour period) once per day for at least one storm event per calendar month.

VIII. PUBLIC PARTICIPATION

The Regional Water Board considered the issuance of WDRs that will serve as an NPDES permit for the Facility. As a step in the WDR adoption process, Regional Water Board staff developed tentative WDRs and encouraged public participation in the WDR adoption process.

A. Notification of Interested Parties. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the *Contra Costa Times*. The public had access to the agenda and any changes in dates

and locations through the Regional Water Board's website at http://www.waterboards.ca.gov/sanfranciscobay.

B. Written Comments. Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were to be submitted either in person or by mail to the Executive Officer at the Regional Water Board at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of Vince Christian.

For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00p.m on October 17, 2016.

C. Public Hearing. The Regional Water Board held a public hearing on the tentative WDRs during its regular meeting at the following date and time and at the following location:

Date: November 9, 2016
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Vince Christian, (510) 622-2336, vchristian@waterboards.ca.gov .

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested to be in writing.

Dates and venues change. The Regional Water Board web address is http://www.waterboards.ca.gov/sanfranciscobay, where one could access the current agenda for changes in dates and locations.

D. Reconsideration of Waste Discharge Requirements. Any aggrieved person may petition the State Water Board to review the Regional Water Board decision regarding the final WDRs. The State Water Board must receive the petition at the following address within 30 calendar days of the Regional Water Board action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml.

E. Information and Copying. The Report of Waste Discharge, related supporting documents, and comments received are on file and may be inspected at the address above at any time between 9:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged by calling (510) 622-2300.

F. Register of Interested Persons. Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the Facility, and provide a name, address, and phone number.

G. Additional Information. Requests for additional information or questions regarding this Order should be directed to Vince Christian, at (510) 622-2336, or vchristian@waterboards.ca.gov.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ATTACHMENT G
REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS
(SUPPLEMENT TO ATTACHMENT D)

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

Contents

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS (SUPPLEMENT TO ATTACHMENT D)

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

This document applies to dischargers covered by a National Pollutant Discharge Elimination System (NPDES) permit. This document does not apply to Municipal Separate Storm Sewer System (MS4) NPDES permits.

The purpose of this document is to supplement the requirements of Attachment D, Standard Provisions. The requirements in this supplemental document are designed to ensure permit compliance through preventative planning, monitoring, recordkeeping, and reporting. In addition, this document requires proper characterization of issues as they arise, and timely and full responses to problems encountered. To provide clarity on which sections of Attachment D this document supplements, this document is arranged in the same format as Attachment D.

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

B. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

C. Duty to Mitigate – This supplements I.C. of Standard Provisions (Attachment D)

1. Contingency Plan - The Discharger shall maintain a Contingency Plan as originally required by Regional Water Board Resolution 74-10 and as prudent in accordance with current municipal facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan into one document. Discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below will be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code Section 13387. The Contingency Plan shall, at a minimum, contain the provisions of a. through g. below.

a. Provision of personnel for continued operation and maintenance of sewerage facilities during employee strikes or strikes against contractors providing services.

b. Maintenance of adequate chemicals or other supplies and spare parts necessary for continued operations of sewerage facilities.

c. Provisions of emergency standby power.

d. Protection against vandalism.

e. Expeditious action to repair failures of, or damage to, equipment and sewer lines.

f. Report of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges.

g. Programs for maintenance, replacement, and surveillance of physical condition of equipment, facilities, and sewer lines.

2. Spill Prevention Plan - The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and minimize the effects of such events. The Spill Prevention Plan shall:

a. Identify the possible sources of accidental discharge, untreated or partially treated waste bypass, and polluted drainage;

b. Evaluate the effectiveness of present facilities and procedures, and state when they became operational; and

c. Predict the effectiveness of the proposed facilities and procedures, and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

This Regional Water Board, after review of the Contingency and Spill Prevention Plans or their updated revisions, may establish conditions it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of the permit upon notice to the Discharger.

B. Proper Operation & Maintenance – This supplements I.D of Standard Provisions (Attachment D)

1. Operation and Maintenance (O&M) Manual - The Discharger shall maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the O&M Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.

2. Wastewater Facilities Status Report - The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

3. Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs) - POTWs shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Division 4, Chapter 14, Title 23 of the California Code of Regulations.

C. Property Rights – Not Supplemented

D. Inspection and Entry – Not Supplemented

E. Bypass – Not Supplemented

F. Upset – Not Supplemented

G. Other – This section is an addition to Standard Provisions (Attachment D)

1. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by California Water Code Section 13050.

2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater, except in cases where excluding the public is infeasible, such as private property. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.

3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit continues in force and effect until a new permit is issued or the Regional Water Board rescinds the permit.

H. Storm Water – This section is an addition to Standard Provisions (Attachment D)

These provisions apply to facilities that do not direct all storm water flows from the facility to the wastewater treatment plant headworks.

1. Storm Water Pollution Prevention Plan (SWPP Plan)

The SWPP Plan shall be designed in accordance with good engineering practices and shall address the following objectives:

a. To identify pollutant sources that may affect the quality of storm water discharges; and

b. To identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

The SWPP Plan may be combined with the existing Spill Prevention Plan as required in accordance with Section C.2. The SWPP Plan shall be retained on-site and made available upon request of a representative of the Regional Water Board.

2. Source Identification

The SWPP Plan shall provide a description of potential sources that may be expected to add significant quantities of pollutants to storm water discharges, or may result in non-storm water discharges from the facility. The SWPP Plan shall include, at a minimum, the following items:

a. A topographical map (or other acceptable map if a topographical map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing the wastewater treatment facility process areas, surface water bodies (including springs and wells), and discharge point(s) where the facility's storm water discharges to a municipal storm drain system or other points of discharge to waters of the State. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.

b. A site map showing the following:

1) Storm water conveyance, drainage, and discharge structures;

2) An outline of the storm water drainage areas for each storm water discharge point;

3) Paved areas and buildings;

4) Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;

5) Location of existing storm water structural control measures (i.e., berms, coverings, etc.);

6) Surface water locations, including springs and wetlands; and

7) Vehicle service areas.

c. A narrative description of the following:

1) Wastewater treatment process activity areas;

2) Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;

3) Material storage, loading, unloading, and access areas;

4) Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and

5) Methods of on-site storage and disposal of significant materials.

d. A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

3. Storm Water Management Controls

The SWPP Plan shall describe the storm water management controls appropriate for the facility and a time schedule for fully implementing such controls. The appropriateness and priorities of controls in the SWPP Plan shall reflect identified potential sources of pollutants. The description of storm water management controls to be implemented shall include, as appropriate:

a. Storm water pollution prevention personnel

Identify specific individuals (and job titles) that are responsible for developing, implementing, and reviewing the SWPP Plan.

b. Good housekeeping

Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm drain conveyance system.

c. Spill prevention and response

Identify areas where significant materials can spill into or otherwise enter storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, and cleanup equipment and procedures shall be identified, as appropriate. The necessary equipment to implement a cleanup shall be available, and personnel shall be trained in proper response, containment, and cleanup of spills. Internal reporting procedures for spills of significant materials shall be established.

d. Source control

Source controls include, for example, elimination or reduction of the use of toxic pollutants, covering of pollutant source areas, sweeping of paved areas, containment of potential pollutants, labeling of all storm drain inlets with “No Dumping” signs, isolation or separation of industrial and non-industrial pollutant sources so that runoff from these areas does not mix, etc.

e. Storm water management practices

Storm water management practices are practices other than those that control the sources of pollutants. Such practices include treatment or conveyance structures, such as drop inlets, channels, retention and detention basins, treatment vaults, infiltration galleries, filters, oil/water separators, etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharges shall be implemented and design criteria shall be described.

f. Sediment and erosion control

Measures to minimize erosion around the storm water drainage and discharge points, such as riprap, revegetation, slope stabilization, etc., shall be described.

g. Employee training

Employee training programs shall inform all personnel responsible for implementing the SWPP Plan. Training shall address spill response, good housekeeping, and material management practices. New employee and refresher training schedules shall be identified.

h. Inspections

All inspections shall be done by trained personnel. Material handling areas shall be inspected for evidence of, or the potential for, pollutants entering storm water discharges. A tracking or follow up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded. Inspection records shall be retained for five years.

i. Records

A tracking and follow-up procedure shall be described to ensure that adequate response and corrective actions have been taken in response to inspections.

4. Annual Verification of SWPP Plan

An annual facility inspection shall be conducted to verify that all elements of the SWPP Plan are accurate and up-to-date. The results of this review shall be reported in the Annual Report to the Regional Water Board described in Section V.C.f.

I. Biosolids Management – This section is an addition to Standard Provisions (Attachment D)

Biosolids must meet the following requirements prior to land application. The Discharger must either demonstrate compliance or, if it sends the biosolids to another party for further treatment or distribution, must give the recipient the information necessary to ensure compliance.

1. Exceptional quality biosolids meet the pollutant concentration limits in Table III of 40 C.F.R. Part 503.13, Class A pathogen limits, and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8). Such biosolids do not have to be tracked further for compliance with general requirements (503.12) and management practices (503.14).

2. Biosolids used for agricultural land, forest, or reclamation shall meet the pollutant limits in Table I (ceiling concentrations) and Table II or Table III (cumulative loadings or pollutant concentration limits) of 503.13. They shall also meet the general requirements (503.12) and management practices (503.14) (if not exceptional quality biosolids) for Class A or Class B pathogen levels with associated access restrictions (503.32) and one of the 10 vector attraction reduction requirements in 503.33(b)(1)-(b)(10).

3. Biosolids used for lawn or home gardens must meet exceptional quality biosolids limits.

4. Biosolids sold or given away in a bag or other container must meet the pollutant limits in either Table III or Table IV (pollutant concentration limits or annual pollutant loading rate limits) of 503.13. If Table IV is used, a label or information sheet must be attached to the biosolids packing that explains Table IV (see 503.14). The biosolids must also meet the Class A pathogen limits and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8).

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

A. Sampling and Analyses – This section is a supplement to III.A and III.B of Standard Provisions (Attachment D)

1. Use of Certified Laboratories

Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with California Water Code Section 13176.

2. Use of Appropriate Minimum Levels

Table C lists the suggested analytical methods for the 126 priority pollutants and other toxic pollutants that should be used, unless a particular method or minimum level (ML) is required in the MRP.

For priority pollutant monitoring, when there is more than one ML value for a given substance, the Discharger may select any one of the analytical methods cited in Table C for compliance determination, or any other method described in 40 C.F.R. part 136 or approved by U.S. EPA (such as the 1600 series) if authorized by the Regional Water Board. However, the ML must be below the effluent limitation and water quality objective. If no ML value is below the effluent limitation and water quality objective, then the method must achieve an ML no greater than the lowest ML value indicated in Table C. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

3. Frequency of Monitoring

The minimum schedule of sampling analysis is specified in the MRP portion of the permit.

a. Timing of Sample Collection

1) The Discharger shall collect samples of influent on varying days selected at random and shall not include any plant recirculation or other sidestream wastes, unless otherwise stipulated by the MRP.

2) The Discharger shall collect samples of effluent on days coincident with influent sampling unless otherwise stipulated by the MRP or the Executive Officer. The Executive Officer may approve an alternative sampling plan if it is demonstrated to be representative of plant discharge flow and in compliance with all other permit requirements.

3) The Discharger shall collect grab samples of effluent during periods of day-time maximum peak effluent flows (or peak flows through secondary treatment units for facilities that recycle effluent flows).

4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does

not comply with permit limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.

i. The Discharger shall perform bioassay tests on final effluent samples; when chlorine is used for disinfection, bioassay tests shall be performed on effluent after chlorination-dechlorination; and

ii. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet the percent survival specified in the permit.

b. Conditions Triggering Accelerated Monitoring

1) If the results from two consecutive samples of a constituent monitored in a 30-day period exceed the monthly average limit for any parameter (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter is in compliance with the monthly average limit.

2) If any maximum daily limit is exceeded, the Discharger shall increase its sampling frequency to daily within 24 hours after the results are received that indicate the exceedance of the maximum daily limit until two samples collected on consecutive days show compliance with the maximum daily limit.

3) If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay test is less than 70 percent), the Discharger shall initiate a new test as soon as practical, and the Discharger shall investigate the cause of the mortalities and report its findings in the next self monitoring report (SMR).

4) The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limit is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring as required by its permit.

5) When a bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.

6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limits using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-

TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

c. Storm Water Monitoring

The requirements of this section only apply to facilities that are not covered by an NPDES permit for storm water discharges and where not all site storm drainage from process areas (i.e., areas of the treatment facility where chemicals or wastewater could come in contact with storm water) is directed to the headworks. For storm water not directed to the headworks during the wet season (October 1 to April 30), the Discharger shall:

1) Conduct visual observations of the storm water discharge locations during daylight hours at least once per month during a storm event that produces significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor, etc.

2) Measure (or estimate) the total volume of storm water discharge, collect grab samples of storm water discharge from at least two storm events that produce significant storm water discharge, and analyze the samples for oil and grease, pH, TSS, and specific conductance.

   The grab samples shall be taken during the first 30 minutes of the discharge. If collection of the grab samples during the first 30 minutes is impracticable, grab samples may be taken during the first hour of the discharge, and the Discharger shall explain in the Annual Report why the grab sample(s) could not be taken in the first 30 minutes.

3) Testing for the presence of non-storm water discharges shall be conducted no less than twice during the dry season (May 1 to September 30) at all storm water discharge locations. Tests may include visual observations of flows, stains, sludges, odors, and other abnormal conditions; dye tests; TV line surveys; or analysis and validation of accurate piping schematics. Records shall be maintained describing the method used, date of testing, locations observed, and test results.

4) Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the monitoring program that storm water discharges from different locations are substantially identical.

5) Records of all storm water monitoring information and copies of all reports required by the permit shall be retained for a period of at least three years from the date of sample, observation, or report.

d. Receiving Water Monitoring

The requirements of this section only apply when the MRP requires receiving water sampling.

1) Receiving water samples shall be collected on days coincident with effluent sampling for conventional pollutants.

2) Receiving water samples shall be collected at each station on each sampling day during the period within one hour following low slack water. Where sampling during lower slack water is impractical, sampling shall be performed during higher slack water. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated in the MRP.

3) Samples shall be collected within one foot of the surface of the receiving water, unless otherwise stipulated in the MRP.

B. Biosolids Monitoring – This section supplements III.B of Standard Provisions (Attachment D)

When biosolids are sent to a landfill, sent to a surface disposal site, or applied to land as a soil amendment, they must be monitored as follows:

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

Metric tons biosolids/365 days	Frequency
0-290	Once per year
290-1500	Quarterly
1500-15,000	Six times per year
Over 15,000	Once per month

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

- Land Application: Arsenic, cadmium, copper, mercury, molybdenum, nickel, lead, selenium, and zinc
- Municipal Landfill: Paint filter test (pursuant to 40 C.F.R. 258)
- Biosolids-only Landfill or Surface Disposal Site (if no liner and leachate system): arsenic, chromium, and nickel

C. Standard Observations – This section is an addition to III of Standard Provisions (Attachment D)

1. Receiving Water Observations

The requirements of this section only apply when the MRP requires standard observations of the receiving water. Standard observations shall include the following:

a. *Floating and suspended materials* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.

b. *Discoloration and turbidity*: description of color, source, and size of affected area.

c. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

d. *Beneficial water use*: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.

e. *Hydrographic condition*: time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).

f. *Weather conditions*:

1) Air temperature; and

2) Total precipitation during the five days prior to observation.

2. Wastewater Effluent Observations

The requirements of this section only apply when the MRP requires wastewater effluent standard observations. Standard observations shall include the following:

a. *Floating and suspended material of wastewater origin* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence.

b. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

3. Beach and Shoreline Observations

The requirements of this section only apply when the MRP requires beach and shoreline standard observations. Standard observations shall include the following:

a. *Material of wastewater origin*: presence or absence, description of material, estimated size of affected area, and source.

b. *Beneficial use*: estimate number of people participating in recreational water contact, non-water contact, or fishing activities.

4. Land Retention or Disposal Area Observations

The requirements of this section only apply to facilities with on-site surface impoundments or disposal areas that are in use. This section applies to both liquid and solid wastes, whether confined or unconfined. The Discharger shall conduct the following for each impoundment:

a. Determine the amount of freeboard at the lowest point of dikes confining liquid wastes.

b. Report evidence of leaching liquid from area of confinement and estimated size of affected area. Show affected area on a sketch and volume of flow (e.g., gallons per minute [gpm]).

c. Regarding odor, describe presence or absence, characterization, source, distance of travel, and wind direction.

d. Estimate number of waterfowl and other water-associated birds in the disposal area and vicinity.

5. Periphery of Waste Treatment and/or Disposal Facilities Observations

The requirements of this section only apply when the MRP specifies periphery standard observations. Standard observations shall include the following:

a. *Odor*: presence or absence, characterization, source, and distance of travel.

b. *Weather conditions*: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

A. Records to be Maintained – This supplements IV.A of Standard Provisions (Attachment D)

The Discharger shall maintain records in a manner and at a location (e.g., wastewater treatment plant or Discharger offices) such that the records are accessible to Regional Water Board staff. The minimum period of retention specified in Section IV, Records, of the Federal Standard Provisions shall be extended during the course of any unresolved litigation regarding the subject discharge, or when requested by the Regional Water Board or Regional Administrator of U.S. EPA, Region IX.

A copy of the permit shall be maintained at the discharge facility and be available at all times to operating personnel.

B. Records of monitoring information shall include – This supplements IV.B of Standard Provision (Attachment D)

1. Analytical Information

Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.

2. Flow Monitoring Data

For all required flow monitoring (e.g., influent and effluent flows), the additional records shall include the following, unless otherwise stipulated by the MRP:

a. Total volume for each day; and

b. Maximum, minimum, and average daily flows for each calendar month.

3. Wastewater Treatment Process Solids

a. For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:

1) Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and

2) Final disposition of such solids (e.g., landfill, other subsequent treatment unit).

b. For final dewatered biosolids from the treatment plant as a whole, records shall include the following:

1) Total volume or mass of dewatered biosolids for each calendar month;

2) Solids content of the dewatered biosolids; and

3) Final disposition of dewatered biosolids (disposal location and disposal method).

4. Disinfection Process

For the disinfection process, these additional records shall be maintained documenting process operation and performance:

a. For bacteriological analyses:

1) Wastewater flow rate at the time of sample collection; and

2) Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in this Order).

b. For the chlorination process, when chlorine is used for disinfection, at least daily average values for the following:

1) Chlorine residual of treated wastewater as it enters the contact basin (mg/L);

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. Treatment Process Bypasses

A chronological log of all treatment process bypasses, including wet weather blending, shall include the following:

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

e. Description of, or reference to other reports describing, the bypass event, the cause, the corrective actions taken (except for wet weather blending that is in compliance with permit conditions), and any additional monitoring conducted.

6. Treatment Facility Overflows

This section applies to records for overflows at the treatment facility. This includes the headworks and all units and appurtenances downstream. The Discharger shall retain a chronological log of overflows at the treatment facility and records supporting the information provided in section V.E.2.

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

C. Monitoring Reports – This section supplements V.C of Standard Provisions (Attachment D)

1. Self Monitoring Reports

For each reporting period established in the MRP, the Discharger shall submit an SMR to the Regional Water Board in accordance with the requirements listed in this document and at the frequency the MRP specifies. The purpose of the SMR is to document treatment performance, effluent quality, and compliance with the waste discharge requirements of this Order.

a. Transmittal letter

Each SMR shall be submitted with a transmittal letter. This letter shall include the following:

1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;

2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;

3) Causes of violations;

4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);

5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that

supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and

7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

Each report shall include a compliance evaluation summary. This summary shall include each parameter for which the permit specifies effluent limits, the number of samples taken during the monitoring period, and the number of samples that exceed applicable effluent limits.

c. Results of analyses and observations

1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.

2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

ii. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reporting limit, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a Pollutant Minimization Program, the Discharger shall not be deemed out of compliance.

3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (ML) to zero. The Discharger shall calculate and report dioxin-TEQs using the following formula,

where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \Sigma\ (C_x \times TEF_x \times BEF_x)$$

where: C_x = measured or estimated concentration of congener *x*
TEF_x = toxicity equivalency factor for congener x
BEFx = bioaccumulation equivalency factor for congener *x*

Table A

Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	1998 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

d. Data reporting for results not yet available

The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses require additional time to complete analytical processes and report results. For cases where required monitoring parameters require additional time to complete analytical processes and reports, and results are not available in time to be included in the SMR for the subject monitoring period, the Discharger shall describe such circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

e. Flow data

The Discharger shall provide flow data tabulation pursuant to Section IV.B.2.

f. Annual self monitoring report requirements

By the date specified in the MRP, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the following:

1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;

2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);

3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;

4) List of approved analyses, including the following:

(i) List of analyses for which the Discharger is certified;

(ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and

(iii) List of "waived" analyses, as approved;

5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;

6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and

7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

g. Report submittal

The Discharger shall submit SMRs to:

California Regional Water Quality Control Board

San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: NPDES Wastewater Division

h. Reporting data in electronic format

The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. If the Discharger chooses to submit SMRs electronically, the following shall apply:

1) *Reporting Method*: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).

2) *Monthly or Quarterly Reporting Requirements*: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until U.S. EPA approves the electronic signature or other signature technologies, Dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).

3) *Annual Reporting Requirements*: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

D. Compliance Schedules – Not supplemented

E. Twenty-Four Hour Reporting – This section supplements V.E of Standard Provision (Attachment D)

1. Spill of Oil or Other Hazardous Material Reports

a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.

b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

1) Date and time of spill, and duration if known;

2) Location of spill (street address or description of location);

3) Nature of material spilled;

4) Quantity of material involved;

5) Receiving water body affected, if any;

6) Cause of spill;

7) Estimated size of affected area;

8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

9) Corrective actions taken to contain, minimize, or clean up the spill;

10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and

11) Persons or agencies notified.

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants[1]

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and are consistent with and supercede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008, issued pursuant to California Water Code Section 13383.

a. Two (2)-Hour Notification

For any unauthorized discharges that result in a discharge to a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services (telephone 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. The notification to the Regional Water Board shall be via the Regional Water Board's online reporting system at www.wbers.net, and shall include the following:

1) Incident description and cause;

2) Location of threatened or involved waterway(s) or storm drains;

3) Date and time the unauthorized discharge started;

4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfected secondary treated, and so on); and

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

Within 24 hours, the Discharger shall certify to the Regional Water Board, at www.wbers.net, that the State Office of Emergency Services and the local health officers or directors of environmental health with jurisdiction over the affected water bodies have been notified of the unauthorized discharge.

c. 5-Day Written Report

Within five business days, the Discharger shall submit a written report, via the Regional Water Board's online reporting system at www.wbers.net, that includes, in addition to the information required above, the following:

1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;

2) Efforts implemented to minimize public exposure to the unauthorized discharge;

3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;

4) Corrective measures taken to minimize the impact of the unauthorized discharge;

5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;

6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and

7) Quantity and duration of the unauthorized discharge, and the amount recovered.

d. Communication Protocol

To clarify the multiple levels of notification, certification, and reporting, the current communication requirements for unauthorized discharges from municipal wastewater treatment plants are summarized in Table B that follows.

Table B

Summary of Communication Requirements for Unauthorized Discharges[1] from Municipal Wastewater Treatment Plants

Discharger is required to:	Agency Receiving Information	Time frame	Method for Contact
1. Notify	California Emergency Management Agency (Cal EMA)	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Telephone – (800) 852-7550 (obtain a control number from Cal EMA)
	Local health department	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Depends on local health department
	Regional Water Board	As soon as possible, but not later than **2 hours** after becoming aware of the unauthorized discharge.	Electronic[2] www.wbers.net
2. Certify	Regional Water Board	As soon as possible, but not later than **24 hours** after becoming aware of the unauthorized discharge.	Electronic[3] www.wbers.net
3. Report	Regional Water Board	Within **5 business days** of becoming aware of the unauthorized discharge.	Electronic[4] www.wbers.net

[1] California Code of Regulations, Title 23, Section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment or disposal system.

[2] In the event that the Discharger is unable to provide online notification within 2 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the notification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the notification information into the Regional Water Board's online system in electronic format.

[3] In most instances, the 2-hour notification will also satisfy 24-hour certification requirements. This is because the notification form includes fields for documenting that OES and the local health department have been contacted. In other words, if the Discharger is able to complete all the fields in the notification form within 2 hours, certification requirements are also satisfied. In the event that the Discharger is unable to provide online certification within 24 hours of becoming aware of an unauthorized discharge, it shall phone the Regional Water Board's spill hotline at (510) 622-2369 and convey the same information contained in the certification form. In addition, within 3 business days of becoming aware of the unauthorized discharge, the Discharger shall enter the certification information into the Regional Water Board's online system in electronic format.

[4] If the Discharger cannot satisfy the 5-day reporting requirements via the Regional Water Board's online reporting system, it shall submit a written report (preferably electronically in pdf) to the appropriate Regional Water Board case manager. In cases where the Discharger cannot satisfy the 5-day reporting requirements via the online reporting system, it must still complete the Regional Water Board's online reporting requirements within 15 calendar days of becoming aware of the unauthorized discharge.

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISION – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

VIII. DEFINITIONS – This section is an addition to Standard Provisions (Attachment D)

More definitions can be found in Attachment A of this NPDES Permit.

1. Arithmetic Calculations

   a. Geometric mean is the antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

$$\text{Geometric Mean} = Anti\log\left(\frac{1}{N}\sum_{i=1}^{N} Log(C_i)\right)$$

   or

$$\text{Geometric Mean} = (C_1 * C_2 * \ldots * C_N)^{1/N}$$

   Where "N" is the number of data points for the period analyzed and "C" is the concentration for each of the "N" data points.

   b. Mass emission rate is obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.345}{N}\sum_{i=1}^{N} Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.785}{N}\sum_{i=1}^{N} Q_i C_i$$

   In which "N" is the number of samples analyzed in any calendar day and "Q_i" and "C_i" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" grab samples that may be taken in any calendar day. If a composite sample is taken, "C_i" is the concentration measured in the composite sample and "Q_i" is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow-weighted average of the same constituent in the combined waste streams as follows:

Cd = Average daily concentration = $\frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$

In which "N" is the number of component waste streams and "Q" and "C" are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the "N" waste streams. "Q_t" is the total flow rate of the combined waste streams.

c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the formulas in the paragraph above, using the effluent concentration limit specified in the permit for the period and the specified allowable flow.

d. POTW removal efficiency is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

Removal Efficiency (%) = 100 × [1-(Effluent Concentration/Influent Concentration)]

2. Biosolids means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from or created in wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow and underflow in the solids handling parts of the wastewater treatment system.

3. Blending is the practice of recombining wastewater that has been biologically treated with wastewater that has bypassed around biological treatment units.

4. Bottom sediment sample is (1) a separate grab sample taken at each sampling station for the determination of selected physical-chemical parameters, or (2) four grab samples collected from different locations in the immediate vicinity of a sampling station while the boat is anchored and analyzed separately for macroinvertebrates.

5. Composite sample is a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow rate of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative sampling protocol for the given parameter subject to Executive Officer approval.

6. Depth-integrated sample is defined as a water or waste sample collected by allowing a sampling device to fill during a vertical traverse in the waste or receiving water body being sampled. The Discharger shall collect depth-integrated samples in such a manner that the collected sample will be representative of the waste or water body at that sampling point.

7. Flow sample is an accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.

8. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the wastewater is collected.

9. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.

10. Overflow is the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g., through manholes, at pump stations, and at collection points) upstream from the treatment plant headworks or from any part of a treatment plant facility.

11. Priority pollutants are those constituents referred to in 40 C.F.R. Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.

12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 C.F.R. 401.15.

14. Untreated waste is raw wastewater.

15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

Table C

List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method[5]	Minimum Levels[6] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
1.	Antimony	204.2					10	5	50	0.5	5	0.5		1000
2.	Arsenic	206.3				20		2	10	2	2	1		1000
3.	Beryllium						20	0.5	2	0.5	1			1000
4.	Cadmium	200 or 213					10	0.5	10	0.25	0.5			1000
5a.	Chromium (III)	SM 3500												
5b.	Chromium (VI)	SM 3500				10	5							1000
	Chromium (total)[7]	SM 3500					50	2	10	0.5	1			1000
6.	Copper	200.9					25	5	10	0.5	2			1000
7.	Lead	200.9					20	5	5	0.5	2			10,000
8.	Mercury	1631 (note)[8]												
9.	Nickel	249.2					50	5	20	1	5			1000
10.	Selenium	200.8 or SM 3114B or C						5	10	2	5	1		1000
11.	Silver	272.2					10	1	10	0.25	2			1000
12.	Thallium	279.2					10	2	10	1	5			1000
13.	Zinc	200 or 289					20		20	1	10			
14.	Cyanide	SM 4500 CN^- C or I				5								
15.	Asbestos (only required for dischargers to MUN waters)[9]	0100.2 [10]												
16.	2,3,7,8-TCDD and 17 congeners (Dioxin)	1613												
17.	Acrolein	603	2.0	5										
18.	Acrylonitrile	603	2.0	2										
19.	Benzene	602	0.5	2										
33.	Ethylbenzene	602	0.5	2										
39.	Toluene	602	0.5	2										
20.	Bromoform	601	0.5	2										
21.	Carbon Tetrachloride	601	0.5	2										
22.	Chlorobenzene	601	0.5	2										
23.	Chlorodibromomethane	601	0.5	2										

[5] The suggested method is the U.S. EPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another U.S. EPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.

[6] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., U.S. EPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.

[7] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).

[8] The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).

[9] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

[10] Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, U.S. EPA 600/R-94-134, June 1994.

CTR No.	Pollutant/Parameter	Analytical Method[5]	Minimum Levels[6] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
24.	Chloroethane	601	0.5	2										
25.	2-Chloroethylvinyl Ether	601	1	1										
26.	Chloroform	601	0.5	2										
75.	1,2-Dichlorobenzene	601	0.5	2										
76.	1,3-Dichlorobenzene	601	0.5	2										
77.	1,4-Dichlorobenzene	601	0.5	2										
27.	Dichlorobromomethane	601	0.5	2										
28.	1,1-Dichloroethane	601	0.5	1										
29.	1,2-Dichloroethane	601	0.5	2										
30.	1,1-Dichloroethylene or 1,1-Dichloroethene	601	0.5	2										
31.	1,2-Dichloropropane	601	0.5	1										
32.	1,3-Dichloropropylene or 1,3-Dichloropropene	601	0.5	2										
34.	Methyl Bromide or Bromomethane	601	1.0	2										
35.	Methyl Chloride or Chloromethane	601	0.5	2										
36.	Methylene Chloride or Dichlorormethane	601	0.5	2										
37.	1,1,2,2-Tetrachloroethane	601	0.5	1										
38.	Tetrachloroethylene	601	0.5	2										
40.	1,2-Trans-Dichloroethylene	601	0.5	1										
41.	1,1,1-Trichloroethane	601	0.5	2										
42.	1,1,2-Trichloroethane	601	0.5	2										
43.	Trichloroethene	601	0.5	2										
44.	Vinyl Chloride	601	0.5	2										
45.	2-Chlorophenol	604	2	5										
46.	2,4-Dichlorophenol	604	1	5										
47.	2,4-Dimethylphenol	604	1	2										
48.	2-Methyl-4,6-Dinitrophenol or Dinitro-2-methylphenol	604	10	5										
49.	2,4-Dinitrophenol	604	5	5										
50.	2-Nitrophenol	604		10										
51.	4-Nitrophenol	604	5	10										
52.	3-Methyl-4-Chlorophenol	604	5	1										
53.	Pentachlorophenol	604	1	5										
54.	Phenol	604	1	1		50								
55.	2,4,6-Trichlorophenol	604	10	10										
56.	Acenaphthene	610 HPLC	1	1	0.5									
57.	Acenaphthylene	610 HPLC		10	0.2									
58.	Anthracene	610 HPLC		10	2									
60.	Benzo(a)Anthracene or 1,2 Benzanthracene	610 HPLC	10	5										
61.	Benzo(a)Pyrene	610 HPLC		10	2									
62.	Benzo(b)Fluoranthene or 3,4 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									
74.	Dibenzo(a,h)Anthracene	610 HPLC		10	0.1									
86.	Fluoranthene	610 HPLC	10	1	0.05									
87.	Fluorene	610 HPLC		10	0.1									
92.	Indeno(1,2,3-cd) Pyrene	610 HPLC		10	0.05									

CTR No.	Pollutant/Parameter	Analytical Method[5]	Minimum Levels[6] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
100.	Pyrene	610 HPLC		10	0.05									
68.	Bis(2-Ethylhexyl)Phthalate	606 or 625	10	5										
70.	Butylbenzyl Phthalate	606 or 625	10	10										
79.	Diethyl Phthalate	606 or 625	10	2										
80.	Dimethyl Phthalate	606 or 625	10	2										
81.	Di-n-Butyl Phthalate	606 or 625		10										
84.	Di-n-Octyl Phthalate	606 or 625		10										
59.	Benzidine	625		5										
65.	Bis(2-Chloroethoxy)Methane	625		5										
66.	Bis(2-Chloroethyl)Ether	625	10	1										
67.	Bis(2-Chloroisopropyl)Ether	625	10	2										
69.	4-Bromophenyl Phenyl Ether	625	10	5										
71.	2-Chloronaphthalene	625		10										
72.	4-Chlorophenyl Phenyl Ether	625		5										
73.	Chrysene	625		10	5									
78.	3,3'-Dichlorobenzidine	625		5										
82.	2,4-Dinitrotoluene	625	10	5										
83.	2,6-Dinitrotoluene	625		5										
85.	1,2-Diphenylhydrazine (note)[11]	625		1										
88.	Hexachlorobenzene	625	5	1										
89.	Hexachlorobutadiene	625	5	1										
90.	Hexachlorocyclopentadiene	625	5	5										
91.	Hexachloroethane	625	5	1										
93.	Isophorone	625	10	1										
94.	Naphthalene	625	10	1	0.2									
95.	Nitrobenzene	625	10	1										
96.	N-Nitrosodimethylamine	625	10	5										
97.	N-Nitrosodi-n-Propylamine	625	10	5										
98.	N-Nitrosodiphenylamine	625	10	1										
99.	Phenanthrene	625		5	0.05									
101.	1,2,4-Trichlorobenzene	625	1	5										
102.	Aldrin	608	0.005											
103.	α-BHC	608	0.01											
104.	β-BHC	608	0.005											
105.	γ-BHC (Lindane)	608	0.02											
106.	δ-BHC	608	0.005											
107.	Chlordane	608	0.1											
108.	4,4'-DDT	608	0.01											
109.	4,4'-DDE	608	0.05											
110.	4,4'-DDD	608	0.05											
111.	Dieldrin	608	0.01											
112.	Endosulfan (alpha)	608	0.02											
113.	Endosulfan (beta)	608	0.01											
114.	Endosulfan Sulfate	608	0.05											
115.	Endrin	608	0.01											
116.	Endrin Aldehyde	608	0.01											

[11] Measurement for 1,2-Diphenylhydrazine may use azobenzene as a screen: if azobenzene is measured at >1 ug/l, then the Discharger shall analyze for 1,2-Diphenylhydrazine.

CTR No.	Pollutant/Parameter	Analytical Method[5]	Minimum Levels[6] (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
117.	Heptachlor	608	0.01											
118.	Heptachlor Epoxide	608	0.01											
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5											
126.	Toxaphene	608	0.5											

APPENDIX B

USS-POSCO INDUSTRIES

P.O. Box 471
Pittsburg, California 94565

October 12, 2016

Vince Christian
CA Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Sutie 1400
Oakland, CA 94612

Subject: Tentative Order Comments

Reference: NPDES CA0005002

Vince,

USS-POSCO Industries (UPI) submits the following comments for your consideration related to the Tentative Order for our facility recently released for public comment:

UPI requests reconsideration of a WQBEL for pentachlorophenol based on a single unqualified sample result. UPI has only had one positive sample in the past ten years. Pentachlorophenol is not a chemical present or used in any processes at the facility.

UPI requests reconsideration of a WQBEL for 3,3-dicholorbenzidine. UPI has only had one positive sample in the past ten years. This is most likely a false positive from the laboratory. 3,3-dicholorbenzidine is not a chemical present or used in any processes at the facility.

UPI requests reconsideration of the imposed chronic toxicity monthly average limit back to 3-sample median. Turnaround time for chronic toxicity sample results usually take between 2.5-3 weeks to obtain from the lab and require a week in advance notification to schedule a test due to availability of test species. If UPI decides to perform another monitoring sample during the same month to determine compliance with the monthly average limit, it will not be feasible due to the time constraint. Therefore a 3-sample median would be a more suitable limit to conform to UPI's chronic toxicity requirements.

UPI requests reconsideration of the imposed daily maximum of 6.6 TUc and average monthly limit of 3.3 TUc for chronic toxicity back to 8 TUc and 4 TUc as previously stated in the previous NPDES permit. In order to protect UPI from possible high result excursions, we ask to reconsider the imposed daily max and average monthly limits back to current limits.

If you have any questions or comments, please call Freddy Ripoli at (925) 439- 6316.

Thank you,

Freddy Ripoli

APPENDIX C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESPONSE TO WRITTEN COMMENTS

On the Tentative Order for
USS-POSCO Industries
Pittsburg, Contra Costa County

The Regional Water Board received written comments from USS-POSCO Industries (UPI) on a tentative order distributed for public comment on September 16, 2016. Regional Water Board staff summarized the comments, shown below in *italics* (paraphrased for brevity), and followed each comment with staff's response. For the full content and context of the comments, please refer to the comment letter.

All revisions to the tentative order are shown with underline text for additions and strikethrough ~~text~~ for deletions.

UPI Comments

Comment 1: *UPI requested that we reconsider issuing effluent limits for pentachlorophenol and 3,3-dichlorobenzadine. Both chemicals have only been detected once in the past ten years, the detections are believed to be false positive results, and neither chemical is used by UPI. Also, pentachlorophenol was not detected above quantification limits.*

Response: We retained the effluent limits for pentachlorophenol and 3,3-dichlorobenzadine because both pollutants triggered "reasonable potential" to exceed water quality objectives based on the State Implementation Policy (SIP).[1] That methodology requires that we consider detected values, even if the results cannot be quantified. Since both pollutants have "reasonable potential," we include effluent limits. While UPI believes the reported results were false-positives, it has not provided evidence to support this claim. Moreover, when UPI reported the results, it certified that they were "true, accurate, and complete."

Comment 2: *UPI requested that we retain the chronic toxicity limits from the previous order (single-sample maximum of 8 TUc and three-sample median of 4 TUc) instead of the more stringent proposed limits (daily maximum of 6.6 TUc and monthly average of 3.3 TUc). UPI prefers the three-sample median because chronic toxicity tests require a week's advance notice to schedule a test and 2.5 to 3 weeks to process results. Therefore; it is difficult to schedule more than one test in a single month.*

Response: We retained the chronic toxicity limits because they reflect the methodology set forth in the SIP and U.S. EPA's Technical Support Document[2] for toxics control. To derive the limits, we translated the Basin Plan narrative water quality objective for toxicity into a numeric criterion (1.0 TUc) based on the Technical Support Document and then used the SIP method to calculate a maximum daily limit (6.6 TUc) and a monthly average limit (3.3 TUc). In doing so, we used a dilution factor of

[1] *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005). State Water Resources Control Board.

[2] *Technical Support Document for Water Quality-based Toxics Control* (1991). U.S. Environmental Protection Agency. EPA/505/2-90-001.

4:1 (D=3) based on UPI's dilution study. This dilution factor corresponds to an estimated 50-foot radius mixing zone around the outfall. Available information does not support a larger mixing zone, which would be needed to justify a higher dilution credit and higher limits. Although we acknowledge that it is difficult to conduct more than one chronic toxicity test per month, it is possible. In any case, we see no basis for equating the monthly limit derived in accordance with the SIP with a three-sample median (the tentative order requires quarterly chronic toxicity testing, so a three-sample median would reflect conditions over a roughly nine-month period).