

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

STAFF SUMMARY REPORT (John H. Madigan)  
MEETING DATE: May 9, 2018

**ITEM:** 5B

**SUBJECT:** NRG Delta, LLC, Pittsburg Generating Station, Pittsburg, Contra Costa County  
– Reissuance of NPDES Permit

**CHRONOLOGY:** June 2002 – Permit Reissued

**DISCUSSION:** This Revised Tentative Order (Appendix A) would reissue the NPDES permit for the Pittsburg Generating Station in Pittsburg. The Pittsburg Generating Station is shut down and no longer generates electricity. However, power generating equipment is still present and the facility discharges industrial stormwater, some of which may be exposed to residual contamination, including mercury. A wastewater treatment plant at the facility treats stormwater from the power generating units prior to discharge to Suisun Bay. The facility also discharges stormwater through an additional 16 outfalls to Suisun Bay and Willow Creek, a tributary to Suisun Bay.

The Revised Tentative Order would rescind technology-based limitations that no longer apply because the operations triggering them no longer occur. Chief among these are limitations related to the once-through cooling process that is no longer in use now that the facility is shut down. The Revised Tentative Order would require continued operation of the wastewater treatment plant until we confirm that stormwater no longer contains residual waste.

We received comments (Appendix B) from NRG Delta, LLC, and the City of Pittsburg on a draft permit distributed for review. Appendix C contains our responses to those comments. We resolved most comments, modifying the draft permit as appropriate. The Revised Tentative Order reflects these changes, as well as minor editorial and formatting changes. We expect the permit to remain uncontested.

**RECOMMEN-  
DATION:** Adoption of the Revised Tentative Order

**FILE:** CW-248542

**APPENDICES:** A. Revised Tentative Order  
B. Comments  
C. Response to Comments

Appendix A  
Revised Tentative Order

**San Francisco Bay Regional Water Quality Control Board**

**REVISED TENTATIVE ORDER No. R2-2018-XXXX  
NPDES PERMIT NO. CA0004880**

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

**Table 1. Discharger Information**

<b>Discharger</b>	NRG Delta, LLC
<b>Facility Name</b>	Pittsburg Generating Station
<b>Facility Address</b>	696 West 10th Street
<b>CIWQS Place Number</b>	Pittsburg, CA 94565

**Table 2. Discharge Locations**

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated stormwater from Units 1-6 basement sumps, Unit 7 building sumps, yard drains, and secondary containment areas; stormwater from clean-closed ponds, paved area west of chlorine building, and Unit 7 cooling canal; fire water and hydrant test water	38.0414	-121.8903	Suisun Bay
003	Stormwater	38.0375	-121.9000	Willow Creek
004	Stormwater	38.0292	-121.9000	Willow Creek
005A	Stormwater	38.0414	-121.8931	Suisun Bay
005B	Stormwater	38.0408	-121.8944	Suisun Bay
006	Stormwater	38.0375	-121.9042	Willow Creek
007	Stormwater	38.0389	-121.8997	Willow Creek
008	Stormwater	38.0394	-121.9006	Willow Creek
009	Stormwater	38.0361	-121.9003	Willow Creek
010	Stormwater	38.0319	-121.8989	Willow Creek
011	Stormwater	38.0311	-121.8986	Willow Creek
012	Stormwater	38.0403	-121.8969	Suisun Bay
013	Stormwater	38.0403	-121.8967	Suisun Bay
014A	Stormwater	38.0406	-121.8961	Suisun Bay
014B	Stormwater	38.0406	-121.8958	Suisun Bay
014C	Stormwater	38.0406	-121.8958	Suisun Bay
015	Stormwater	38.0406	-121.8950	Suisun Bay

**Table 3. Administrative Information**

This Order was adopted on:	
This Order shall become effective on:	July 1, 2018
This Order shall expire on:	June 30, 2023
CIWQS Regulatory Measure Number	

The Discharger shall file a Report of Waste Discharge for updated WDRs in accordance with California Code of Regulations, title 23, and as an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	October 3, 2022
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:	Minor

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.

\_\_\_\_\_  
Bruce H. Wolfe, Executive Officer

## Contents

I.	Facility Information .....	4
II.	Findings.....	4
III.	Discharge Prohibitions.....	4
IV.	Effluent Limitations and Discharge Specifications .....	5
V.	Receiving Water Limitations .....	6
VI.	Provisions.....	7
	A. Standard Provisions .....	7
	B. Monitoring and Reporting .....	7
	C. Special Provisions .....	7
	1. Reopener Provisions.....	7
	2. Effluent Characterization Study and Report .....	8
	3. Other Special Provisions .....	9

## Tables

Table 1.	Discharger Information.....	1
Table 2.	Discharge Locations .....	1
Table 3.	Administrative Information .....	1
Table 4.	Effluent Limitations at Discharge Point No. 001 .....	5
Table 5.	Effluent Limitations at Discharge Point Nos. 003 through 015 .....	5

## Attachments

Attachment A	– Definitions .....	A-1
Attachment B	– Facility Map.....	B-1
Attachment C	– Process Flow Diagram.....	C-1
Attachment D	– Federal Standard Provisions.....	D-1
Attachment E	– Monitoring and Reporting Program (MRP).....	E-1
Attachment F	– Fact Sheet.....	F-1
Attachment G	– Regional Standard Provisions and Monitoring and Reporting Requirements .....	G-1
Attachment S	– Stormwater Provisions, Monitoring, and Reporting Requirements .....	S-1

## I. FACILITY INFORMATION

Information describing the Pittsburg Generating Station (Facility) is summarized in Table 1 and 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 a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States as listed in Table 2 subject to the WDRs in this Order.
- 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 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, G, and S are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** No provisions and 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. R2-2002-0072 (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 than described in this Order is prohibited.
- B.** Bypass of untreated or partially-treated wastewater to waters of the United States is prohibited, except as provided for in Attachment D section I.G.

**IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

**A. Discharge Point No. 001**

The Discharger shall comply with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001G (and Monitoring Location EFF-001H where noted), as described in the MRP:

**Table 4. Effluent Limitations at Discharge Point No. 001**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH <sup>[1]</sup>	standard units	---	---	6.5	8.5
Total Suspended Solids (TSS)	mg/L	30	100	---	---
Oil and Grease <sup>[2]</sup>	mg/L	10	20	---	---
Copper, Total Recoverable	µg/L	7.1	14	---	---
Polychlorinated Biphenyl (PCB) Compounds	pg/L	No Detectable Amount			
Acute Toxicity <sup>[3]</sup>	% survival	---	---	70	---

Unit Abbreviations:

mg/L = milligrams per liter  
% survival = percent survival  
pg/L = picograms per liter

Footnotes:

- [1] 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.
- [2] The Discharger shall also comply with the oil and grease effluent limits at Monitoring Location EFF-001H.
- [3] A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit.

In addition, the Discharger shall comply with the requirements of Attachment S (*Stormwater Provisions, Monitoring, and Reporting Requirements*) section I.G; those requirements pertain to stormwater action levels set forth in Attachment S, Table A (for pH, total suspended solids, and oil and grease), and advanced Best Management Practices.

**B. Discharge Point Nos. 003 through 015**

The Discharger shall comply with the following effluent limitations at Discharge Point Nos. 003 through 015, with compliance measured at Monitoring Locations EFF-003 through EFF-015, as described in the MRP:

**Table 5. Effluent Limitations at Discharge Point Nos. 003 through 015**

Parameter	Units	Average Monthly	Maximum Daily
Oil and Grease	mg/L	10	20

Unit Abbreviation:

mg/L = milligrams per liter

In addition, the Discharger shall comply with the requirements of Attachment S section I.G. Those requirements pertain to stormwater action levels set forth in Attachment S, Table A (for pH, total suspended solids, and oil and grease), and advanced Best Management Practices.

## V. RECEIVING WATER LIMITATIONS

- A. The discharge 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, unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses;
  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                      7.0 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 Attachment G (*Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Wastewater Discharge Permits*).
  
- 3.** The Discharger shall comply with all applicable provisions of Attachment S.

**B. Monitoring and Reporting**

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

**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, or will cease to have, a reasonable potential to cause or contribute to 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.
- f. Or 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 from the following discharge points 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 the monitoring station set forth below, as defined in the MRP, at no less than the frequency specified below:

<u>Discharge Points</u>	<u>Monitoring Location</u>	<u>Minimum Frequency</u>
001	EFF-001G	Once per year

The samples shall be analyzed for the pollutants listed in Attachment G, Table B, 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-10). Compliance with this requirement 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 exceedance of applicable water quality objectives.

### b. Reporting Requirements

- i. **Routine Reporting.** The Discharger shall report the following in the transmittal letter for the self-monitoring report associated with the month in which the samples were collected:
  - (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-10 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. The Discharger need not resubmit data and information already submitted electronically into CIWQS; however, it shall reference the monthly monitoring reports where it provided such information.

**3. Other Special Provisions**

a. **Copper Action Plan.** The Discharger shall implement pretreatment, source control, and pollution prevention for copper in accordance with the following tasks and time schedule:

**Table 6. Copper Action Plan**

Task	Compliance Date
<b>1. Review Potential Copper Sources</b> Submit an inventory of potential copper sources.	September 1, 2018
<b>2. Implement Copper Control Program</b> Submit a plan for and begin implementation of a program to reduce the copper sources identified in Task 1.	With annual self-monitoring report due February 1, 2019
<b>3. Implement Additional Actions</b> If the Regional Water Board notifies the Discharger that the three-year rolling mean 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 self-monitoring report due February 1 (at least 90 days following notification)
<b>4. Report Status of Copper Control Program.</b> Submit an annual report documenting copper control program implementation that evaluates the effectiveness of the actions taken, including any additional actions required by Task 3 above, and provides a schedule for actions to be taken within the next 12 months.	With annual self-monitoring report due February 1 each year

b. **Mercury Reduction and Influent Annual Report.** The Discharger shall continue its efforts to reduce mercury in treatment plant influent to a level that meets the concentration-based triggers in Order No. R2-2017-0041 (NPDES No. CA0038849), Table 7 (Mercury Triggers for Industrial Dischargers). The Discharger shall submit the following:

i. Report summarizing its efforts and analyzing influent mercury concentrations to the treatment system, both prior to the effective date of this Order and at Monitoring Location INF-001G during the term of this order. The Discharger shall submit this report with the annual self-monitoring report described in MRP section VII.B.2.b, due February 1, 2019.

ii. Reports updating the February 1, 2019, report, including evaluations of the effectiveness of the Stormwater Pollution Prevention Plan required by Attachment S,

section I.A. If stormwater at Monitoring Location INF-001G contains mercury concentrations above the concentration-based triggers in Table 7 of Order No. R2-2017-0041, the Discharger shall propose updated measures to reduce sources of waste to the treatment system that may contain mercury. The Discharger shall submit these reports with the annual self-monitoring reports described in MRP section VII.B.2.b, due February 1 each year.

**c. Diversion of Treatment System Effluent to Discharge Point No. 003**

- i. Prior to diverting treatment system effluent from Discharge Point No. 001 to Discharge Point No. 003, the Discharger shall submit an antidegradation analysis consistent with State Water Board Administrative Procedures Update 90-004 (*Antidegradation Policy Implementation for NPDES Permitting*, July 1990) for Executive Officer approval. At a minimum, the analysis shall include the constituents listed in Table 4 of this Order and mercury.
- ii. The antidegradation analysis shall demonstrate:
  - a. that minor effects that will not result in a significant reduction in receiving water quality; and
  - b. that any reduction in receiving water quality due to the change in discharge location will:
    - not degrade receiving water quality below water quality standards;
    - be spatially localized or limited with respect to the water body;
    - be temporally limited; and
    - not result in any long-term deleterious water quality effects.
- iii. After receiving written confirmation from the Executive Officer that the antidegradation report meets the requirements of c.i and c.ii, above, the Discharger shall continue to monitor Monitoring Locations EFF-001G and EFF-003 as required by MRP Table E-003 and shall use the monitoring data from these locations to evaluate compliance with the limits in Tables 4 and Table 5.

**d. Change in Control or Ownership of Discharge Point No. 003**

- i. If there is any change in control or ownership of Discharge Point No. 003, the Discharger shall submit a written agreement between it and the new operator or owner containing a specific date for transfer of permit responsibility, coverage, and liability for the stormwater discharge from Discharge Point No. 003.
- ii. If the Executive Officer determines that no other change in the permit is necessary and confirms in writing that the Regional Water Board has received the written agreement per item d.i, above, this Order's monitoring requirements and effluent limits shall no longer apply to Discharge Point No. 003, effective on the date specified by that written agreement.
- iii. If, pursuant to Provision VI.C.3.c, the Discharger redirects treatment system effluent from Discharge Point No. 001 to Discharge Point No. 003, this Order's requirements for Discharge Point Nos. 001 and 003 shall fully apply to Discharge Point No. 003.

## ATTACHMENT A – DEFINITIONS

### **Arithmetic Mean ( $\mu$ )**

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:

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

### **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 wasteload 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 reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Attachment B.

**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 ( $\sigma$ )**

Measure of variability calculated as follows:

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

where:

x is the observed value;

$\mu$  is the arithmetic mean of the observed values; and

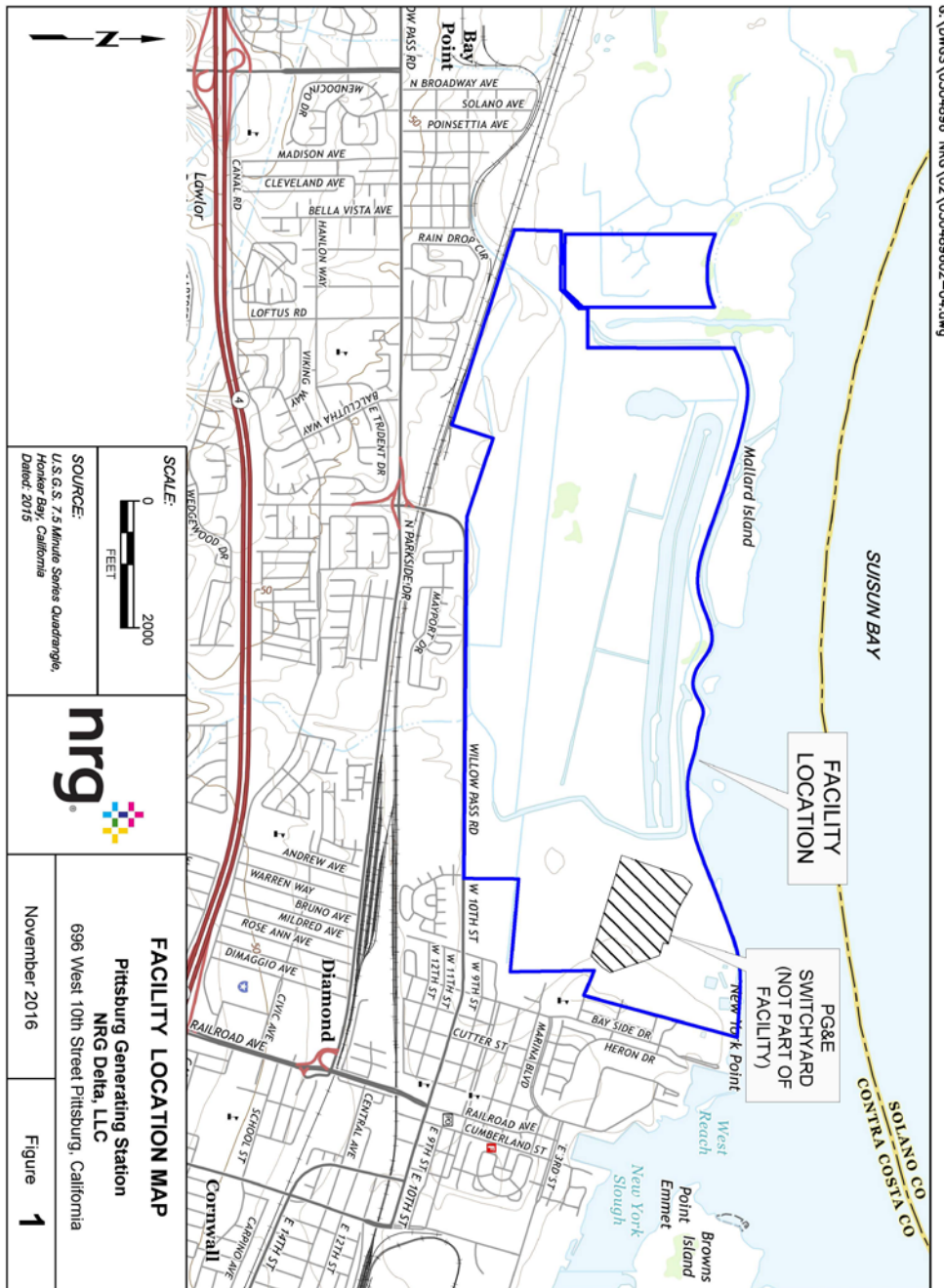
n is the number of samples.

### **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**



**Figure B-1  
 Facility Location**

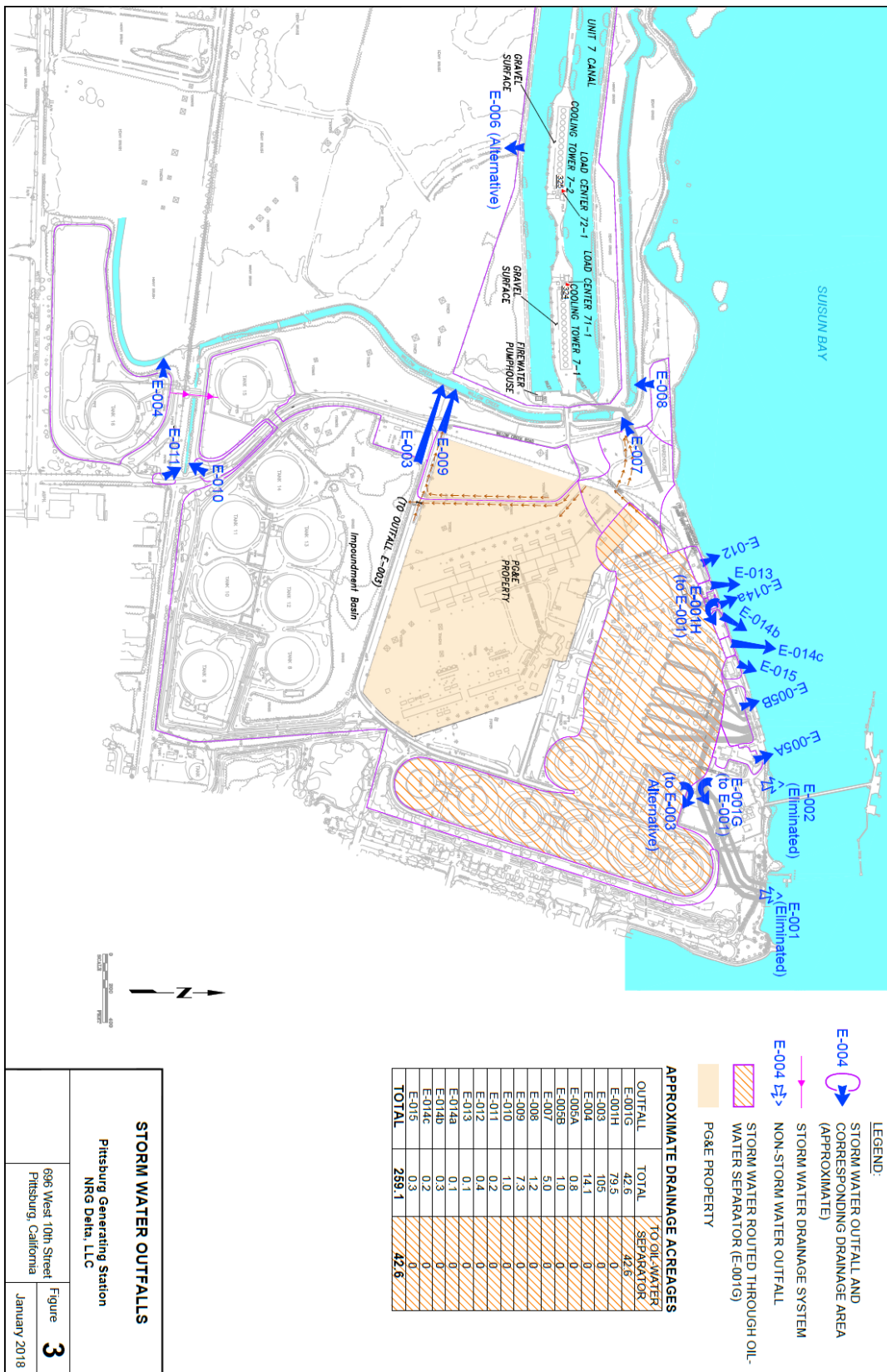


Figure B-2  
Outfall Locations

**ATTACHMENT C – PROCESS FLOW DIAGRAM**

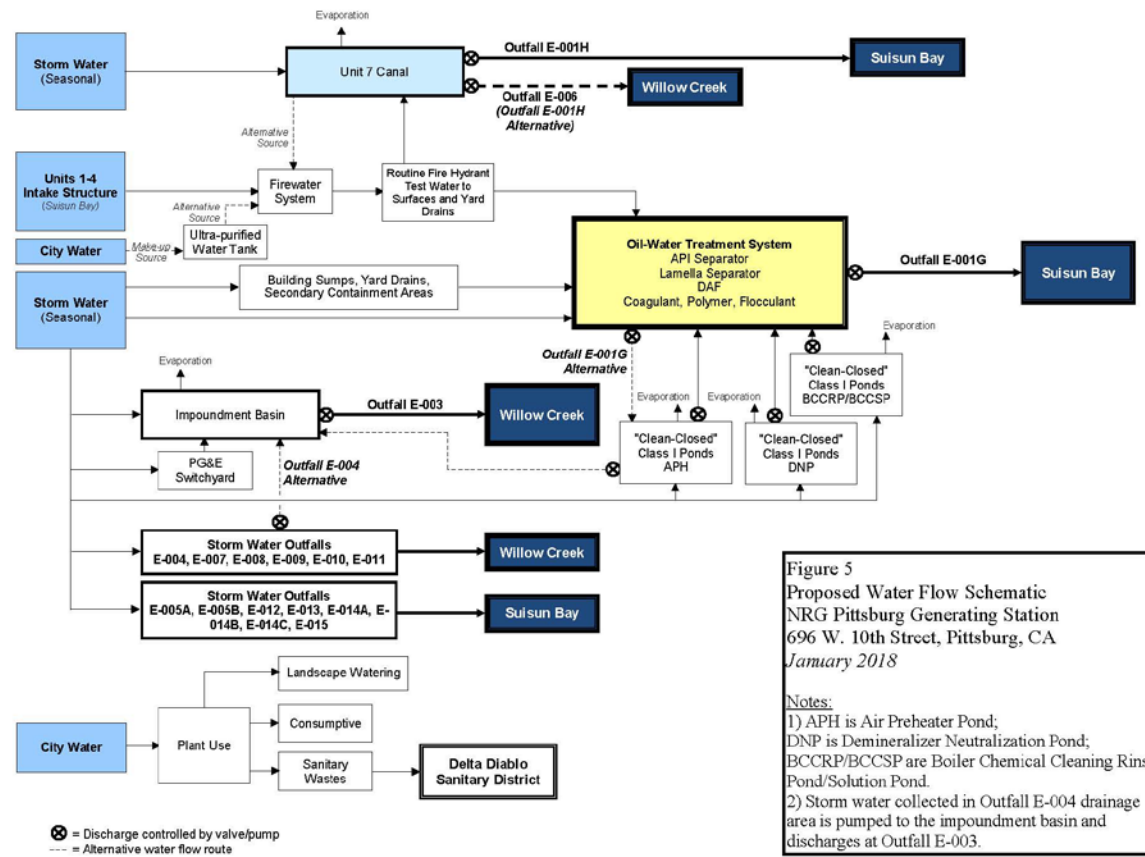


Figure 5  
Proposed Water Flow Schematic  
NRG Pittsburg Generating Station  
696 W. 10th Street, Pittsburg, CA  
January 2018

Notes:  
1) APH is Air Preheater Pond;  
DNP is Demineralizer Neutralization Pond;  
BCCRP/BCCSP are Boiler Chemical Cleaning Rinse Pond/Solution Pond.  
2) Storm water collected in Outfall E-004 drainage area is pumped to the impoundment basin and discharges at Outfall E-003.

**Figure C-1  
Process Flow Diagram**

## **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; for permit termination, revocation and reissuance, or modification; or 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 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 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, 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 assuring 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 prior notice, if possible at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2020, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)

**b. Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2020, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (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 this 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(1)(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 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. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:
  - 1. The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either (a) the method ML is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter, or (b) the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in a facility's discharge is

high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N, for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

#### **IV. STANDARD PROVISIONS—RECORDS**

- A. 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, V.B.5, and V.B.6 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).)
6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e).)

### **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. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (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. chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State 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 report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report 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.

For noncompliance related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours:
  - 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).)

#### **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. For noncompliance related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (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).)

#### **J. Initial Recipient for Electronic Reporting Data**

The owner, operator, or duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group (see 40 C.F.R. § 127.2(c)). U.S. EPA will update and maintain this list. (40 C.F.R. § 122.41(l)(9).)

### **VI. STANDARD PROVISIONS—ENFORCEMENT**

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

## VII. ADDITIONAL PROVISIONS—NOTIFICATION LEVELS

### A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” (40 C.F.R. § 122.42(a)(1)):
  - a. 100 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(1)(i));
  - b. 200  $\mu\text{g/L}$  for acrolein and acrylonitrile; 500  $\mu\text{g/L}$  for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” (40 C.F.R. § 122.42(a)(2)):
  - a. 500 micrograms per liter ( $\mu\text{g/L}$ ) (40 C.F.R. § 122.42(a)(2)(i));
  - b. 1 milligram per liter ( $\text{mg/L}$ ) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
  - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

### B. 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

I.	General Monitoring Provisions.....	E-2
II.	Monitoring Locations.....	E-2
III.	Influent Monitoring Requirements .....	E-3
IV.	Effluent Monitoring Requirements .....	E-3
V.	Toxicity Testing Requirements.....	E-4
	A. Acute Toxicity .....	E-4
	B. Chronic Toxicity.....	E-5
VI.	Receiving Water Monitoring Requirements .....	E-6
VII.	Reporting Requirements .....	E-6
	A. General Monitoring and Reporting Requirements .....	E-6
	B. Self-Monitoring Reports (SMRs).....	E-6
	C. Discharge Monitoring Reports (DMRs).....	E-9

### Tables

Table E-1.	Monitoring Locations.....	E-2
Table E-2.	Influent Monitoring.....	E-3
Table E-3.	Effluent Monitoring .....	E-3
Table E-4.	CIWQS Reporting.....	E-7
Table E-5.	Monitoring Periods .....	E-8

**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)* or *Stormwater Provisions, Monitoring, and Reporting Requirements (Attachment S)*, 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.
- C. The Discharger shall ensure that results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:  

State Water Resources Control Board  
 Quality Assurance Program Officer  
 Office of Information Management and Analysis  
 1001 I Street, Sacramento, CA 95814
- D. The Discharger shall implement a Quality Assurance-Quality Control Program for any onsite field tests (e.g., turbidity, pH, temperature, dissolved oxygen, conductivity, disinfectant residual) analyzed by a noncertified laboratory. The Discharger shall keep a manual onsite containing the steps followed in this program and must demonstrate sufficient capability to adequately perform these field tests (e.g., qualified and trained employees, properly calibrated and maintained field instruments). The program shall conform to U.S. EPA guidelines or other approved procedures.

**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 <sup>[1]</sup>
Influent	INF-001G	A point prior to the treatment system at which all waste tributary to the treatment system is present and preceding chemical treatment.
Effluent	EFF-001G	A point after all treatment is complete (i.e., effluent leaving the treatment system) and prior to both mixing with stormwater and discharge.



Sampling Location Type	Monitoring Location Name	Monitoring Location Description <sup>[1]</sup>
Stormwater	EFF-001H, EFF-003, EFF-004, EFF-005A, EFF-005B, EFF-006 through EFF-013, EFF-014A, EFF-014B, EFF-014C, and EFF-015	Any point where all stormwater flow tributary to each Discharge Point is present and, for Monitoring Location EFF-001H, prior to mixing with treatment system effluent.

### III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treatment system influent at Monitoring Location INF-001G as follows:

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Mercury	µg/L	Grab	1/Quarter <sup>[1]</sup>

Unit Abbreviation:

µg/L = micrograms per liter

Sample Type:

Grab = grab sample

Sampling Frequency:

1/Quarter = once per quarter

Footnote:

[1] The Discharger shall collect at least one sample in any calendar quarter in which the treatment system operates.

### IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor discharges from the Facility according to the following table. Monitoring data from the first of Monitoring Locations EFF-014A, EFF-14B, and EFF-14C to have significant stormwater flow may be used to represent all three of those Monitoring Locations.

**Table E-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency
<b>Monitoring Location EFF-001G</b>			
Flow <sup>[1]</sup>	MGD	Continuous	Continuous/D
pH	standard units	Grab	1/Month
Total Suspended Solids (TSS)	mg/L	Grab	1/Month
Oil and Grease	mg/L	Grab	1/Quarter
Copper, Total Recoverable	µg/L	Grab	1/Month
PCBs, Total (as Aroclors)	µg/L	Grab	1/Year
Acute Toxicity	% survival	Grab	1/Month
Chronic Toxicity <sup>[2]</sup>	TUc	Grab	Once
<b>Monitoring Locations EFF-001H and EFF-003 through EFF-015<sup>[3, 4]</sup></b>			
Flow	MGD	Continuous	1/Month <sup>[5]</sup>
pH	standard units	Grab	1/Quarter
TSS	mg/L	Grab	1/Quarter

Parameter	Units	Sample Type	Minimum Sampling Frequency
Oil and Grease	mg/L	Grab	1/Quarter
Visual Observations <sup>[6]</sup>	---	---	1/Month including at each sampling event

Unit Abbreviations:

µg/L = micrograms per liter  
 mg/L = milligrams per liter  
 MGD = million gallons per day  
 TUc = chronic toxicity units  
 % = percent

Sample Types:

C-24 = 24-hour composite sample  
 Continuous = measured continuously  
 Grab = grab sample

Sampling Frequencies:

Continuous/D = measured continuously, and recorded and reported daily  
 1/Month = once per month  
 1/Quarter = once per quarter  
 1/Year = once per year

Footnotes:

- [1] Flows shall be monitored continuously, and the following shall be reported in monthly self-monitoring reports:  
     Daily average flow (MGD)  
     Monthly total flow volume (MG)
- [2] Whole effluent chronic toxicity testing shall consist of screening tests only, as described in MRP section V.B.
- [3] The Discharger shall monitor significant stormwater flow that occurs during scheduled operating hours as soon as practicable. The Discharger shall explain in its self-monitoring report any circumstances of monitoring not done in the first four hours of significant discharge (e.g., discharge not occurring during scheduled operating hours).
- [4] Because the Facility is only staffed part-time, these stormwater monitoring requirements shall apply during the operating hours of 10:00 a.m. to 3:00 p.m., Monday through Friday.
- [5] The monthly cumulative rainfall shall be measured, and the total volume of stormwater discharged for each month shall be calculated based on the drainage area served by each discharge point. The monthly rainfall amount and the monthly discharge volume for each discharge point shall be reported on a monthly basis.
- [6] Visual observations shall be as required by Attachment S section II.A.

## V. TOXICITY TESTING REQUIREMENTS

### A. Acute Toxicity

1. Compliance with the acute toxicity effluent limitations shall be evaluated at Monitoring Location EFF-001G by measuring survival of test organisms exposed to 24-hour static non-renewal or 48-hour static renewal bioassays, depending on the anticipated duration of discharge.
2. Test organisms shall be rainbow trout (*Onchorhynchus 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 adjust the pH of acute toxicity samples prior to performing bioassays to minimize ammonia toxicity interference.
5. Bioassay 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. Chronic Toxicity

### 1. Monitoring Requirements

- a. **Sampling.** The Discharger shall collect 24-hour composite effluent samples at Monitoring Location EFF-001G 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 Discharger shall conduct a species 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, 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. **Methodology.** Sample collection, handling, and preservation shall be in accordance with U.S. EPA protocols. 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 1st 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 3rd edition (EPA-821-R-02-014) and *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, currently 4th 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.

## 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 IC25 or EC25 (see MRP Appendix E-1). If the IC25 or EC25 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. IC15, IC25, IC40, and IC50 values (or EC15, EC25, EC40, and EC50) as percent effluent
  - vii. TUc values (100/NOEL and upper and lower confidence intervals)
  - viii. Mean percent mortality ( $\pm$ s.d.) after 96 hours in 100% effluent (if applicable)
  - ix. IC50 or EC50 values for reference toxicant tests
  - x. Available water quality measurements for each test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, and ammonia)

## 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, G, and S) related to monitoring, reporting, and recordkeeping.

### 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) website ([http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs](http://www.waterboards.ca.gov/water_issues/programs/ciwqs)). 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 section V.C.1.f of Attachment G (as amended by section IX.B, below). See also Provisions VI.C.2 (Effluent Characterization Study and Report), VI.C.3.a (Copper Action Plan), and VI.C.3.b (Mercury Reduction and Inflow Annual Report) of this 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-4. 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 <sup>[1]</sup>	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 <sup>[2]</sup>
Volume and Duration of Blended Discharge <sup>[3]</sup>	Required for all blended effluent discharges	

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	Attached File
Analytical Method	Not required (Discharger may select "data unavailable") <sup>[1]</sup>	
Collection Time Analysis Time	Not required (Discharger may select "0:00") <sup>[1]</sup>	

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).
- [3] The requirement for volume and duration of blended discharge applies only if this Order authorizes the Discharger to discharge blended effluent.

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-5. 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
1/Quarter	Closest January 1, April 1, July 1, or October 1 before or after Order effective date <sup>[1]</sup>	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
Once	Order effective date	Once during the permit term within 12 months prior to applying for permit reissuance

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)**

DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using the Electronic Self-Monitoring Reports module eSMR 2.5 or the latest upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at [http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

**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 IC25 or EC25. If the IC25 or EC25 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-Kärber. EC25 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 IC25 is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. 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**

<b>Species</b>	<b>(Scientific Name)</b>	<b>Effect</b>	<b>Test Duration</b>	<b>Reference</b>
Alga	<i>(Skeletonema costatum)</i> <i>(Thalassiosira pseudonana)</i>	Growth rate	4 days	1
Red alga	<i>(Champia parvula)</i>	Number of cystocarps	7–9 days	3
Giant kelp	<i>(Macrocystis pyrifera)</i>	Percent germination; germ tube length	48 hours	2
Abalone	<i>(Haliotis rufescens)</i>	Abnormal shell development	48 hours	2
Oyster Mussel	<i>(Crassostrea gigas)</i> <i>(Mytilus edulis)</i>	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	<i>(Strongylocentrotus purpuratus, S. franciscanus)</i> <i>(Dendraster excentricus)</i>	Percent fertilization or larval development	1 hour or 72 hours	2
Shrimp	<i>(Americamysis bahia)</i>	Percent survival; growth	7 days	3
Shrimp	<i>(Holmesimysis costata)</i>	Percent survival; growth	7 days	2
Topsmelt	<i>(Atherinops affinis)</i>	Percent survival; growth	7 days	2
Silversides	<i>(Menidia beryllina)</i>	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	<i>(Pimephales promelas)</i>	Survival; growth rate	7 days	4
Water flea	<i>(Ceriodaphnia dubia)</i>	Survival; number of young	7 days	4
Alga	<i>(Selenastrum capricornutum)</i>	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 <sup>[1]</sup>	
		Ocean	Marine/Estuarine
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 <sup>[2]</sup> 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 10 parts 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**

I.	Permit Information.....	F-3
II.	Facility Description.....	F-4
	A. Previous Conditions .....	F-4
	B. Existing Conditions .....	F-5
	C. Wastewater Treatment System.....	F-6
	D. Sludge and Oil Management .....	F-6
	E. Other Stormwater Management .....	F-7
	F. Discharge Points and Receiving Waters .....	F-7
	G. Previous Requirements and Monitoring Data .....	F-8
	H. Compliance Summary .....	F-9
III.	Applicable Plans, Policies, and Regulations.....	F-10
IV.	Rationale For Effluent Limitations and Discharge Specifications .....	F-13
	A. Discharge Prohibitions .....	F-13
	B. Basin Plan Discharge Prohibition 1.....	F-14
	1. Discharge Point No. 001 .....	F-14
	2. Discharge Point Nos. 003 through 015 .....	F-14
	C. Technology-Based Effluent Limitations .....	F-15
	1. Scope and Authority .....	F-15
	2. Discharge Point No. 001 .....	F-15
	3. Discharge Point Nos. 003 through 015 .....	F-17
	D. Water Quality-Based Effluent Limitations (WQBELs).....	F-17
	1. Scope and Authority .....	F-17
	2. Beneficial Uses and Water Quality Criteria and Objectives .....	F-18
	3. Need for WQBELs (Reasonable Potential Analysis).....	F-21
	4. WQBEL Calculations.....	F-27
	E. Discharge Requirement Considerations .....	F-28
V.	Rationale for Receiving Water Limitations .....	F-29
VI.	Rationale for Provisions.....	F-30
	A. Standard Provisions.....	F-30
	B. Monitoring and Reporting .....	F-30
	C. Special Provisions .....	F-30
	1. Reopener Provisions.....	F-30
	2. Effluent Characterization Study and Report .....	F-30
	3. Other Special Provisions .....	F-31
VII.	Rationale for Monitoring and Reporting Program (MRP).....	F-31
VIII.	Public Participation .....	F-33

### Tables

Table F-1. Facility Information.....	F-3
Table F-2. Discharge Locations.....	F-7
Table F-3. Previous Effluent Limitations and Data at Former Monitoring Location E-001 .....	F-8
Table F-4. Previous Effluent Limitations and Data at Monitoring Location EFF-001G.....	F-9
Table F-5. Previous Effluent Limitations and Data at Monitoring Locations EFF-003 through EFF-015 .....	F-9
Table F-6. Basin Plan Beneficial Uses .....	F-11
Table F-7. ELGs Applicable to “Low Volume Waste Sources” .....	F-16
Table F-8. Factors Considered Pursuant to 40 C.F.R. section 125.3(d) .....	F-16
Table F-9. Site-Specific Translators .....	F-21
Table F-10. Priority Pollutant Reasonable Potential Analysis.....	F-23
Table F-11. Water Quality-Based Effluent Limit Calculations .....	F-27
Table F-12. Monitoring Requirements Summary .....	F-32

**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 this 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**

<b>CIWQS Place ID</b>	248542
<b>Discharger</b>	NRG Delta, LLC (NRG)
<b>Facility Name</b>	Pittsburg Generating Station
<b>Facility Address</b>	696 West 10th Street, Pittsburg, CA 94565
<b>Facility Contact, Title, Phone</b>	Aman Prakash Singh, Operations Supervisor, (925) 427-3451
<b>Authorized Person to Sign and Submit Reports</b>	Lee Moore, Plant Manager, NRG Delta, LLC, Pittsburg Generating Station, 696 West 10th Street, Pittsburg, CA 94565
<b>Mailing Address</b>	Same as facility address
<b>Billing Address</b>	Same as facility address
<b>Facility Type</b>	Privately-owned retired power plant
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	1
<b>Complexity</b>	A
<b>Pretreatment Program</b>	No
<b>Reclamation Requirements</b>	No
<b>Mercury and PCBs Requirements</b>	NPDES Permit No. CA0038849
<b>Nutrients Requirements</b>	None
<b>Treatment System Design Flow</b>	2.2 million gallons per day (MGD)
<b>Treatment System Permitted Flow</b>	1.4 MGD (maximum reported flow August 2014 – August 2017)
<b>Average Treatment System Flow (August 2014 – August 2017)</b>	0.054 MGD (including zero discharge days) 0.130 MGD (when discharging)
<b>Watershed</b>	Suisun Bay
<b>Receiving Water</b>	Willow Creek and Suisun Bay
<b>Receiving Water Type</b>	Estuarine

**A.** NRG Delta, LLC (formerly Mirant Delta, LLC) (Discharger) owns the Pittsburg Generating Station (Facility), which discharges to Suisun Bay and Willow Creek, which is tributary to Suisun Bay, through 17 discharge points.

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. CA0004880. The Discharger was previously subject to Order No. R2-2002-0072 (previous order). 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 1, 2006;

the previous order was administratively extended by operation of law. Because Facility operations had changed substantially, the Regional Water Board sent a 13267 order on July 27, 2016, requiring the Discharger to submit a second Report of Waste Discharge by February 1, 2017, which the Discharger did.

The Discharger is authorized to discharge subject to WDRs in this Order at the discharge locations described in Table 2 of this Order. Regulations in 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 (CCR), 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 requirements for continuation of expired permits. (See 40 C.F.R § 122.6(d).)

- C. The discharge is also regulated under NPDES Permit No. CA0038849, which establishes requirements on mercury and polychlorinated biphenyls (PCBs). This Order does not affect that permit.
- D. When applicable, State law requires dischargers to file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains separate jurisdictional authority to enforce such requirements under Water Code 1211. This is not an NPDES permit requirement.

## II. FACILITY DESCRIPTION

The Discharger owns the Facility, a former steam-electric power generation plant. The Facility covers roughly 1,000 acres and is located on the southern shore of Suisun Bay, in the City of Pittsburg in Contra Costa County (Attachment B).

### A. Previous Conditions

Previously, the Facility consisted of seven generating units (Units 1 through 7), with a total baseline generating capacity of 2,080 megawatts. The Discharger retired Units 1 through 4 in 2004 and operated the remaining generating units as a “peaking plant” at times of high electricity demand. The Discharger shut down Units 5 through 7 and the Unit 7 cooling towers and decommissioned the power generation plant on January 1, 2017.

Units 5 and 6 had relied on once-through cooling. The Discharger withdrew cooling water from Suisun Bay at Intake No. I-001 and discharged it through Discharge Point No. 001. The Discharger no longer withdraws once-through cooling water from Suisun Bay. It now withdraws Suisun Bay water only for use in its firewater system.

Unit 7 relied on mechanical-draft wet cooling towers and a cooling canal made of clay and riprap for the sides and base. The Unit 7 cooling canal runs east-to-west as shown in Attachment B, Figure B-2 (labeled “Unit 7 Canal”).

The Discharger has eliminated the following wastewaters from Discharge Point No. 001 by decommissioning the Facility (Monitoring Locations 001A through 001F and 001I through 001K are no longer used.):

- intake screen wash (former Monitoring Location EFF-001A),
- water pretreatment building and reverse osmosis building drains (former Monitoring Location EFF-001B),
- reverse osmosis reject (former Monitoring Location EFF-001C),
- Boilers 1 through 6 blowdown (former Monitoring Location EFF-001D),
- ion exchange regeneration waste (former Monitoring Location EFF-001E),
- fireside/air preheater settling pond effluent (former Monitoring Location EFF-001F),
- Unit 7 cooling tower blowdown (Monitoring Location EFF-001H), and
- Boilers 1 through 7 chemical cleaning waste pond effluent (former Monitoring Location EFF-001I).

## **B. Existing Conditions**

The Discharger no longer generates process wastewater but continues to operate a wastewater treatment system, discussed in Fact Sheet section II.C, to address residual contaminants from power generation in runoff from former process areas. The wastewater treatment system discharges at Discharge Point No. 001. The Discharger also occasionally discharges stormwater accumulated in the Unit 7 cooling canal at Discharge Point No. 001. These discharges are monitored at Monitoring Locations EFF-001G and EFF-001H, respectively, before they commingle prior to Discharge Point No. 001.

The wastewater treatment system receives stormwater and residual oily wastewater from about 43 acres that include former power generating units, fuel storage areas, catch basins, basement and building sumps, and yard drains. This area is shown in Figure B-2 and described further in Fact Sheet section II.C. The wastewater treatment system also receives Fire Water System hydrant test water and, occasionally, stormwater from within the above-mentioned 43 acres collected in several lined Facility ponds. These ponds are the Air Preheater Pond, previously used to store air preheater wash water; the Demineralizer Neutralization Pond, previously used to store neutralized flow from the demineralizer; and the Boiler Chemical Cleaning Rinse Pond and Boiler Chemical Cleaning Solution Pond, previously used to store boiler rinse water and chemical cleaning solution. These ponds were clean-closed in accordance with 27 C.C.R. § 21400(a)(1) in 2005; waste and contaminated material were removed such that these ponds no longer pose a threat to water quality.

There are 16 fuel oil aboveground storage tanks (ASTs) and a cutter stock AST in the eastern and southern portions of the Facility. One of the fuel oil ASTs (Tank 16) was emptied, cleaned, and permanently closed in 2017. The remaining ASTs have a “heel” of oil that remains due to the configuration of the tank bottoms, the high viscosity of the remaining fuel oil, and the location of the tank drains. The Facility also maintains oil-containing transformers and circuit breakers. The Discharger has no current or future plans to use these tanks and plans to sell, permanently close, or remove them before the end of 2023.

The Discharger has a Hazardous Materials Storage Facility and a Hazardous Waste Storage Facility where it stores hazardous materials and wastes. Both storage facilities contain sealed concrete sloped floors with containment and are secured during nonworking hours. There is also one smaller “satellite” hazardous waste storage area. The Discharger intends to remove the majority of materials and wastes in the Hazardous Materials Storage Facility, Hazardous Waste Storage Facility, and satellite hazardous waste storage area, except for a small quantity of



wastewater treatment chemicals in the Hazardous Materials Storage Facility and gasoline for onsite fueling of vehicles.

The Contra Costa Mosquito and Vector Control District oversees a mosquito abatement pump station located in the northwest area of the Facility, along Suisun Bay. The pump station has one pump that is started manually and stopped by a low-level automatic shut-off. The pump station pumps stormwater, including overflows from Willow Creek, from the nearby tidal plain to Suisun Bay. The mosquito abatement pump does not manage industrial stormwater. Also, PG&E-owns a 38-acre switchyard near the center of the Facility. Stormwater from the PG&E switchyard flows to an impoundment basin, where it usually evaporates. The impoundment basin can discharge to Willow Creek at Discharge Point No. 003; discharge is controlled by a valve.

### **C. Wastewater Treatment System**

Stormwater and residual oily wastewater flowing to the wastewater treatment system receives the following treatment:

- collection in a double-lined Class II surface impoundment called the Oily Water Collection Pond (OWCP);
- oil-water separation by an American Petroleum Institute (API) oil-water separator (API separator), which includes an inlet diffuser that facilitates phase separation of oil and water, and a mop skimmer to remove separated oil and oily water;
- dissolved air flotation (DAF);
- secondary oil-water separation in a second oil-water separator (Tank 601); and
- final oil-water separation and solids settling by a lamella plate separator.

To enhance solids and mercury removal, the Discharger adds coagulant, flocculant, and polymer chemicals prior to the lamella plate separator. The lamella plate separator's flow capacity is 2.2 MGD; the DAF unit's flow capacity is 1.1 MGD.

Stormwater and residual oily wastewater drain to the OWCP from the areas around former Units 1 through 7; from the areas around fuel oil ASTs 1 through 7; and from catch basins, Units 1-6 basement sumps, Unit 7 building sumps, and yard drains. Stormwater collected in the "Clean-Closed" Class I ponds is also pumped to the OWCP when necessary (otherwise, this stormwater is allowed to evaporate). Fire Water System hydrant test water also flows to the treatment system. The building sumps and basement sumps flow directly to the API separator, while stormwater from the yard drains flows to the OWCP. Wastewater is pumped from the OWCP to the lamella plate separator. Lamella plate separator effluent is pumped to the DAF tank. DAF effluent is pumped back to the OWCP and is then pumped directly to the lamella plate separator for further treatment before discharge at Discharge Point No. 001. Facility flows are illustrated by Attachment C.

### **D. Sludge and Oil Management**

Oily wastewater from the API separator and DAF tank is directed to Tank 601 for further oil-water separation. Tank 601 maintains a constant level while providing additional gravity separation; oil collects at the top, and water flows back to the API separator. Oil accumulated on the top layer of

Tank 601 is periodically removed by vacuum truck. Recovered sludge and oil are contained for disposal.

**E. Other Stormwater Management**

Facility stormwater that does not flow to the wastewater treatment system is discharged to Suisun Bay or Willow Creek (and ultimately Suisun Bay) through Discharge Point Nos. 003 through 015 (listed in Fact Sheet section II.F below). The Discharger also occasionally discharges stormwater collected in the Unit 7 cooling canal at Discharge Point No. 001, as described in Fact Sheet section II.B, above. The Discharger has developed and maintains a Stormwater Pollution Prevention Plan (SWPPP) covering the entire site.

**F. Discharge Points and Receiving Waters**

Discharge points and receiving waters are described below:

**Table F-2. Discharge Locations**

Discharge Point No.	Effluent Description	Receiving Water
001	Treatment system effluent (treated stormwater from basement sumps, building sumps, yard drains, and secondary containment areas; fire water and hydrant test water) and stormwater runoff collected in the Unit 7 cooling canal	Suisun Bay
003	Stormwater runoff from the PG&E switchyard and secondary containment basins surrounding Fuel Oil ASTs 1 through 16, collected in impoundment basin	Willow Creek
004	Stormwater runoff collected in diked area surrounding Fuel Oil AST 16 and Cutter Stock AST	Willow Creek
005A	Stormwater runoff from area south and east of Unit 1 through 6 intake headworks	Suisun Bay
005B	Stormwater runoff from area east of sandblast building, south of Unit 1 through 6 intake headworks, and north of recirculation pump building	Suisun Bay
006	Stormwater runoff collected in Unit 7 cooling canal, and fire water and hydrant test water (the same effluent may instead be discharged at Discharge Point No. 001 and monitored at Monitoring Location EFF-001H). Discharge controlled by manually-operated valve that is normally closed.	Willow Creek
007	Stormwater runoff from area near laydown yard east of Unit 7 cooling canal and some runoff from northernmost part of the PG&E Switchyard	Willow Creek
008	Stormwater runoff from area near the laydown yard north of Unit 7 cooling canal and west of GC Warehouse	Willow Creek
009	Stormwater runoff from laydown yard and roadways west of the PG&E Switchyard	Willow Creek
010	Stormwater runoff from roadway north of Facility entrance and from area between secondary containment berms for Fuel Oil ASTs 14 and 15	Willow Creek
011	Stormwater runoff from roadway south of Facility entrance and area northeast of Fuel Oil AST 16	Willow Creek
012	Stormwater runoff from area near laydown yard along north fence and west of Discharge Point No. 013	Suisun Bay
013	Stormwater runoff from area west of the Unit 7 circulating water pumps	Suisun Bay
014A	Stormwater runoff from paved area west of chlorine building	Suisun Bay
014B	Stormwater runoff from paved and covered parking area east of chlorine building	Suisun Bay
014C	Stormwater runoff from same covered parking area as Discharge Point No. 014B, but further east of chlorine building	Suisun Bay

Discharge Point No.	Effluent Description	Receiving Water
015	Stormwater runoff from paved area west of sandblast building and parking lot east of Discharge Point No. 014C	Suisun Bay

In the future, the Discharger could re-route the wastewater treatment system discharge from Discharge Point No. 001 to Discharge Point No. 003. In that case, the wastewater treatment system would discharge to the Air Preheater Pond; contents of the Air Preheater Pond would then be pumped to an impoundment basin, which discharges to Discharge Point No. 003 (see Fact Sheet § II.E). The Discharger would continue to monitor treatment system effluent at Monitoring Location EFF 001G prior to treated effluent commingling with stormwater. The Discharger may sell a portion of the Facility property that includes Discharge Point No. 003 and its drainage area, subject to Provision VI.C.3.d.

**G. Previous Requirements and Monitoring Data**

The tables below present the previous order’s effluent limitations and representative monitoring data from the previous order term for discharges relevant to current Facility operations. There are no effluent data for Monitoring Locations EFF-001F and EFF-001I because there were no discharges at those locations, and no data for Monitoring Location EFF-001H because the previous order’s conditional sampling requirements were not triggered. Data collected at Monitoring Locations EFF-001B through EFF-001E are not presented because the discharges monitored at those locations no longer occur and no effluent limit violations are associated with those data:

**Table F-3. Previous Effluent Limitations and Data at Former Monitoring Location E-001**

Parameter	Units	Effluent Limitations		Monitoring Data (April 2005 – August 2017)	
		Daily Maximum	Monthly Average	Highest Monthly Average	Highest Daily Concentration
Copper	µg/L	----	20 <sup>[1]</sup>	53	53
Chromium	µg/L	----	14 <sup>[1]</sup>	8.3	8.3
Lead	µg/L	----	5.3 <sup>[1]</sup>	2.0	2.0
Mercury	µg/L	----	0.165 <sup>[1, 2]</sup>	0.024	0.024
Nickel	µg/L	----	17 <sup>[1]</sup>	10	10
pH	standard units	6.5 – 8.5		6.5 – 8.0	
Acute Toxicity	% survival	[3]	[3]	73 <sup>[4]</sup>	60 <sup>[4]</sup>
Chlorine, Total Residual	mg/L	0.0 <sup>[5]</sup>	----	0.0	0.0
Temperature	°F	[6]		96	

Unit Abbreviations:

- °F = degrees Fahrenheit
- µg/L = micrograms per liter
- mg/L = milligrams per liter
- % survival = percent survival

Footnotes:

- [1] Interim limit. Limit also applied to Discharge Point No. 006, but there was no discharge from that discharge point.
- [2] Limit was superseded by NPDES Permit No. CA0038849 on January 1, 2008.
- [3] Limits were an 11-sample median value of not less than 90 percent survival and an 11-sample 90th percentile value of not less than 70 percent survival.
- [4] The lowest percent survival reported was 60 percent on October 7, 2014, followed by a result of 85 percent survival on October 14, 2014. These were not violations because the 11-sample median and 90th percentile values were in compliance with permit limits.

- [5] Applied as an instantaneous maximum.
- [6] The requirement was “The maximum temperature of the discharge at flood tide shall not exceed the natural receiving water temperature by more than 28 °F (15.6°C).” The highest daily maximum temperature is reported.

**Table F-4. Previous Effluent Limitations and Data at Monitoring Location EFF-001G**

Parameter	Units	Effluent Limitations		Monitoring Data (April 2005 – August 2017) <sup>[1]</sup>	
		Monthly Average	Daily Maximum	Highest Daily Discharge	Average ± Standard Deviation
TSS	mg/L	[2]	[2]	113	16±18
Oil and Grease	mg/L	[2]	[2]	ND < 1.1	ND < 1.1
Mercury, Total	µg/L	[2]	[2]	0.31	0.031±0.062
Acute Toxicity	% survival	[3]		70 <sup>[4]</sup>	99±4.9

Unit Abbreviations:

µg/L = micrograms per liter  
mg/L = milligrams per liter  
% survival = percent survival

Footnotes:

- [1] Acute toxicity was monitored at this discharge point beginning in November 2012; the acute toxicity data are from November 2012 through April 2017.
- [2] The previous order did not require compliance with effluent limits at Monitoring Location EFF-001G.
- [3] The previous order did not require compliance with acute toxicity limits at Monitoring Location EFF-001G. The Regional Water Board required acute toxicity monitoring at Monitoring Location EFF-001G by letter dated July 29, 2013, to ensure that the wastewater treatment chemicals added prior to the lamella plate separator did not cause acute toxicity.
- [4] Minimum percent survival over the monitoring period (November 2012 to April 2017).

**Table F-5. Previous Effluent Limitations and Data at Monitoring Locations EFF-003 through EFF-015**

Parameter	Units	Final Limits		Monitoring Data (April 2005 – August 2017)
		Daily Maximum	Monthly Average	Highest Daily Concentration
Oil and Grease	mg/L	20	10	16

Unit Abbreviation:

mg/L = milligrams per liter

**H. Compliance Summary**

During the last ten years, the Discharger did not violate the terms of the previous order; however, the Discharger violated mercury limits in NPDES Permit No. CA0038849 (Mercury and PCBs Watershed Permit). These mercury violations are relevant to this Order because this Order requires the Discharger to operate a treatment system intended to control mercury discharges. This Order also requires the treatment system to comply with other effluent limits at Monitoring Location EFF-001G, where the mercury violations occurred. Furthermore, this Order’s acute toxicity limitation (Provision IV.B) and monitoring requirements (MRP Table E-3 and section V.A) address potential aquatic toxicity due to the wastewater treatment chemicals used to enhance mercury treatment.

The Mercury and PCBs Watershed Permit’s mercury effluent limits (daily maximum [0.12 µg/L], monthly average [0.079 µg/L] at Discharge Point No. 001) superseded the previous order’s interim mercury effluent limit (daily maximum [0.165 µg/L] at Discharge Point No. 001) effective January 1, 2008. The Discharger violated these mercury limits 51 times after January 2008, as shown in Fact Sheet Attachment F-1.

The Discharger responded to the violations that occurred from August 2010 through April 2012 by cleaning out areas that drain directly to the treatment system, taking inventory of mercury sources, removing over 840 pieces of high-risk mercury-containing equipment, and developing and implementing a Mercury Action Plan. In addition, the Discharger started using wastewater treatment chemicals to enhance mercury treatment. The Regional Water Board sent the Discharger a Notice of Violation (NOV) and required it to submit a technical report under California Water Code section 13267 (*Notice of Violation - Effluent Limitation Exceedances for Mercury, Failure to Accelerate Monitoring and Provide Notification, GenOn Delta LLC, Pittsburg Power Plant, Contra Costa County*, July 31, 2012). The NOV required the Discharger to do the following:

- Clean the entire collection system (e.g., catch basins, sumps, and piping) that drains to the treatment system, or provide a timeline for completing that task, by October 1, 2012.
- Submit a plan for (1) regular cleaning of the collection system draining to the treatment system, (2) removing mercury-containing instrumentation from the Facility, and (3) controlling other identified mercury sources.

The Discharger's August 18, 2012, response stated that the collection system cleaning would be complete by the end of the month and a proposed plan for regular cleaning, equipment removal, and additional source control would be submitted by the required date.

On March 27, 2013, the Regional Water Board issued Order No. R2-2013-1010, assessing \$144,000 in mandatory minimum penalties for the 48 mercury limit violations that took place from August 31, 2010, through November 30, 2012.

The Discharger violated the mercury limits three more times in June 2016 after the Discharger emptied and cleaned treatment system components, including the DAF, API separator, and OWCP, and four stormwater sumps that drain to the treatment system. The Discharger sent the wash water to the API separator for treatment, which may have increased the mercury concentrations sent to the treatment system and thus caused the violations. The Discharger responded by recirculating the volume of water in the OWCP through the treatment system and increasing the coagulant dose. The Discharger also consulted with General Electric to determine an optimal chemical dose during cleaning and added wastewater recirculation and increased chemical doses to its standard operating procedures during such work. Subsequent mercury concentrations have been below the effluent limits. The Discharger continues to implement its March 5, 2012, *Action Plan for Mercury Reduction*.

### **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 § 13260) for discharges to 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 authorizing the Discharger to discharge into waters of the United States at the discharge locations described in Table 2 subject to the WDRs in this Order.

**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 § 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 (WQOs), 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 establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Because of the marine influence on Suisun Bay, total dissolved solids exceed 3,000 mg/L; therefore, Suisun Bay meets an exception to State Water Board Resolution No. 88-63 and the MUN designation does not apply to the receiving waters. The table below lists beneficial uses applicable to Suisun Bay; these beneficial uses also apply to its tributary, Willow Creek:

**Table F-6. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water	Beneficial Uses
001, 003, 004, 005A, 005B, 006, 007, 008, 009, 010, 011, 012, 013, 014A, 014B, 014C, 015	Suisun Bay	Industrial Service Supply (IND) Industrial Process Supply (PRO) Commercial and Sport Fishing (COMM) Estuarine Habitat (EST) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV)

**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.

**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 Fact Sheet § IV.D.2).
- 6. Once-Through Cooling Water Policy.** CWA Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the Best Technology Available (BTA) for minimizing adverse environmental impact, typically impingement and entrainment of marine and estuarine life. On May 4, 2010, the State Water Board adopted the *Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy), which became effective on October 1, 2010. The OTC Policy established closed-cycle wet cooling as BTA and required existing power plants to reduce intake flow and velocity to levels comparable to those for closed-cycle wet cooling or reduce impacts to aquatic life to such levels by other means. The OTC Policy required the Facility to comply by December 31, 2017.

The OTC Policy, as originally adopted, required the State Water Board to prepare and adopt NPDES permits for power plants using OTC. However, the State Water Board amended the OTC Policy through State Water Board Resolution No. 2013-0018 to return NPDES permit issuance for such power plants to the Regional Water Boards. Because the Facility is decommissioned and no longer operates its once-through cooling system, the Facility complies with CWA Section 316(b).

- 7. 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 Fact Sheet § IV.D.1). This Order complies with anti-backsliding provisions.
- 8. Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or

becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect beneficial uses, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all Endangered Species Act requirements.

#### **D. Impaired Waters on CWA 303(d) List**

On July 30, 2015, U.S. EPA approved a revised list of impaired waters 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 water quality standards for the impaired waters.

Suisun Bay is 303(d)-listed as impaired by chlordane, DDT, dieldrin, dioxin compounds (including 2,3,7,8-TCDD), furan compounds, invasive species, mercury, PCBs, dioxin-like PCBs, and selenium. On February 12, 2008, U.S. EPA approved a TMDL for mercury in San Francisco Bay. On March 29, 2010, U.S. EPA approved a TMDL for PCBs in San Francisco Bay. The mercury TMDL applies to this discharge and is implemented through NPDES Permit No. CA0038849. On August 23, 2016, U.S. EPA approved a selenium TMDL for North San Francisco Bay, including Carquinez Strait. The selenium TMDL does not require effluent limits for industrial wastewater dischargers (with the exception of petroleum refineries) because these discharges have an insignificant effect on North Bay water quality.

The discharge is not a significant source of chlordane, PCBs, DDT, or dieldrin because these pollutants have not been detected in the discharge. The discharge is also not a source of invasive species. It is not a significant source of dioxins and furans because discharge concentrations are consistently below water quality objectives.

### **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.

#### **A. Discharge Prohibitions**

- 1. Discharge Prohibition III.A (No discharge at location or in manner different than 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.

- 2. Discharge Prohibition III.B (No bypass to waters of the United States):** This prohibition is based on 40 C.F.R. section 122.41(m) and (n) (see Attachment D section I.G).

## **B. Basin Plan Discharge Prohibition 1**

This Order allows discharge of treated wastewater and stormwater from Discharge Point No. 001 and stormwater from Discharge Point Nos. 003 through 015 without a minimum initial dilution of at least 10:1. Basin Plan Discharge Prohibition 1 (Basin Plan Table 4-1) prohibits the discharge of any wastewater that has particular characteristics of concern to beneficial uses at any point at which the wastewater does not receive an initial dilution of at least 10:1. This prohibition is intended to protect areas such as nontidal waters and dead-end sloughs from the effects of continuous waste discharge; provide a buffer against the effects of abnormal discharges caused by temporary plan upsets or malfunctions; minimize public contact with undiluted wastes; and reduce aesthetic impacts of waste discharges. Basin Plan section 4.2 allows exceptions when 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, such as an alternative discharge site, a higher level of treatment, and/or improved treatment reliability. This Order therefore grants exceptions to Discharge Prohibition 1 for the discharges from Discharge Point Nos. 001 and 003 through 015 as follows.

### **1. Discharge Point No. 001**

The discharge from Discharge Point No. 001 qualifies for an exception to Discharge Prohibition 1. Construction of a deepwater outfall to provide dilution would be an inordinate burden relative to the beneficial uses protected. Also, in case of a treatment system spill or malfunction, incompletely-treated wastewater would be contained in the OWCP, described in Fact Sheet section II.A, thus providing an equivalent level of environmental protection by preventing untreated discharges.

### **2. Discharge Point Nos. 003 through 015**

Discharge Prohibition 1 does not apply to the discharge of stormwater from Discharge Point Nos. 003 through 015 because stormwater flows are not continuous and are not subject to treatment upset. Furthermore, these discharges would qualify for an exception to Discharge Prohibition 1 if the prohibition applied. Providing for deepwater discharge to achieve an initial dilution of at least 10:1 for the stormwater discharges would be an inordinate burden. Provision IV.A.2 of this Order and Attachment S require the Discharger to provide an equivalent level of environmental protection by developing and implementing Best Management Practices (BMPs) reflecting best industry practice considering technological availability and economic practicability to comply with effluent limits and minimize pollutants in stormwater.

## C. Technology-Based Effluent Limitations

### 1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet water quality standards. The CWA requires that technology-based effluent limits be established based on several levels of controls:

- 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 technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including total suspended solids (TSS), 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 effluent discharge and the benefits that would result and also the cost effectiveness of additional industrial treatment beyond BPT.
- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limits that represent state-of-the-art treatment technology for new sources.

Where U.S. EPA has not yet developed technology-based standards for a particular industry or a particular pollutant, CWA section 402(a)(1) and 40 C.F.R. section 125.3 authorize the use of best professional judgment to derive technology-based effluent limits on a case-by-case basis. When best professional judgment is used, the permit must reflect specific factors outlined at 40 C.F.R. section 125.3.

U.S. EPA established technology-based limits and standards for steam electric power generating at 40 C.F.R. section 423, *Effluent Limitations Guidelines for the Steam Electric Power Generating Point Source Category* (ELGs). The technology-based effluent limits in the previous order were based on the ELGs. Because the Facility no longer generates electricity, these ELGs no longer directly apply. However, the Facility continues to have power generation equipment and residual materials onsite, such as fuel oil ASTs containing residual fuel, and other residual contaminants from power generation may be present; therefore, these ELGs are used as guidance in developing the technology-based limits in this Order based on best professional judgment. The technology-based limits in this Order are at least as stringent as those in the previous order.

### 2. Discharge Point No. 001

Discharge Point No. 001 is the only active outfall for wastewater from “low volume waste sources” as defined by the ELGs for steam electric power generating point sources

(40 C.F.R. § 423.11).<sup>1</sup> The following technology-based effluent limits are based on the ELGs for “low volume waste sources”:

**Table F-7. ELGs Applicable to “Low Volume Waste Sources”**

Parameter	Daily Maximum	Monthly Average
TSS	100 mg/L <sup>[1]</sup>	30 mg/L
Oil and Grease	20 mg/L	15 mg/L
pH	6.0 – 9.0 standard units	
Polychlorinated Biphenyl (PCB) Compounds	No detectable amount	

Abbreviations:

CTR = California Toxics Rule (40 C.F.R. § 131.38).

TSS = total suspended solids

mg/L = milligrams per liter

Footnotes:

[1] The maximum daily TSS limit for coal pile runoff is 50 mg/L.

Based on best professional judgment, this Order establishes the above technology-based effluent limits at Discharge Point No. 001 for TSS, oil and grease as a daily maximum, and PCBs. Because the treatment system is designed to control TSS and oil and grease, removals of those pollutants are good indicators of treatment system performance. TSS and oil and grease are conventional pollutants subject to BPT control (40 C.F.R. § 423.12). PCBs are a toxic pollutant subject to BPT and BAT controls (40 C.F.R. § 423.13). BCT control does not apply because the ELGs do not establish BCT control (40 C.F.R. § 423.14).

This Order does not establish the above technology-based effluent limits at Discharge Point No. 001 for oil and grease as a monthly average or for pH. Basin Plan Table 4-2 requires a more stringent monthly average oil and grease limit of 10 mg/L for all treatment facilities. The Basin Plan also requires a more stringent water-quality based pH limit, as discussed in Fact Sheet section IV.D.3.e. This Order instead establishes these more stringent limits required by the Basin Plan.

When using best professional judgment to impose technology-based effluent limitations based on BPT and BAT controls, 40 C.F.R. section 125.3(d) requires that the Regional Water Board consider the following factors:

**Table F-8. Factors Considered Pursuant to 40 C.F.R. section 125.3(d)**

Factors	Considerations
Total cost of application of technology in relation to the effluent reduction benefits to be achieved	The treatment system already exists and does not require upgrades to meet the TSS, oil and grease, and PCBs limits; thus no capital costs will be incurred. Treatment costs will be limited to ongoing operations and maintenance costs.
Age of equipment and facilities involved	The treatment system has been in place since at least 2002.
Process employed	The treatment system employs sedimentation, oil-water separation, dissolved air flotation, lamella plate separation, and chemical addition to enhance

<sup>1</sup> Because the Facility was constructed by 1972, before U.S. EPA promulgated the ELGs in 1982, the new source performance standards would not be appropriate to use as guidance.

	flocculation and settling, to remove TSS, oil and grease, and PCBs (which adhere to solids).
Engineering aspects of application or control techniques	The processes described above are common techniques used to treat industrial wastewater containing TSS and oil and grease; PCBs adhere to solids, thus TSS control techniques also apply to PCBs.
Process changes	No process changes are necessary except possibly adjusting the dosages and types of chemicals added.
Cost of achieving effluent reduction	The treatment system does not require capital improvement to meet the TSS, oil and grease, and PCBs limits; thus no capital costs will be incurred. Treatment costs will be limited to ongoing operations and maintenance costs.
Non-water quality environmental impacts (including energy requirements)	The treatment system already exists and is located on a decommissioned industrial facility; no new non-water quality environmental impacts are expected. Because a significantly lower flow rate is permitted, energy, solid waste handling, and chemical addition requirements are expected to decrease.

Discharge Point No. 001 no longer discharges chemical metal cleaning waste, metal cleaning waste, or blowdown associated with once-through cooling (because the Facility no longer uses once-through cooling); or waste related to flue gas desulfurization, flue gas mercury control, or gasification (because the Facility never engaged in such activity). This Order therefore does not impose technology-based effluent limitations applicable to those processes.

**3. Discharge Point Nos. 003 through 015**

The ELGs at 40 C.F.R. section 423 do not address stormwater. However, 40 C.F.R. section 122.26(b)(14) requires industrial stormwater controls for stormwater runoff from steam electric power generating facilities. This Order applies similar controls through section IV.B of this Order and Attachment S, which requires that the Discharger prepare and implement a SWPPP, and sets forth BMPs, stormwater action levels, and monitoring and reporting requirements. This Order also imposes oil and grease limits based on Basin Plan Table 4-2. The stormwater requirements of this Order are at least as stringent as the requirements of the State Water Board’s *General Permit for Stormwater Discharges Associated with Industrial Activities* (NPDES No. CAS000001).

**D. Water Quality-Based Effluent Limitations (WQBELs)**

**1. Scope and Authority**

This Order contains WQBELs 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 protect designated uses of receiving waters as specified in the Basin Plan.

## 2. Beneficial Uses and Water Quality Criteria and Objectives

Fact Sheet section III.C.1, above, identifies the beneficial uses of Suisun Bay. Water quality criteria and objectives to protect these beneficial uses are described below:

**a. Basin Plan Objectives.** The Basin Plan specifies numerous water quality objectives, such as numeric objectives for 10 priority pollutants and un-ionized ammonia, and narrative water objectives for toxicity and bioaccumulation. The un-ionized ammonia water quality objective is translated into total ammonia and the narrative water quality objectives for dioxin-TEQ and chronic toxicity are translated into numeric objectives as described below:

**i. Ammonia.** Basin Plan section 3.3.20 contains water quality objectives for un-ionized ammonia of 0.025 mg/L as an annual median and 0.16 mg/L as a maximum for Central San Francisco Bay and upstream waters. For this Order, these un-ionized ammonia objectives were translated to equivalent total ammonia criteria since (1) sampling and laboratory methods are unavailable to analyze for un-ionized ammonia, and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on the pH, salinity, and temperature of the receiving water. Based on receiving water data collected by the Regional Monitoring Program (RMP) at the Sacramento River sampling station (BG20), the un-ionized fraction of total ammonia was calculated as follows:

For salinity > 10 ppt:

$$\text{Fraction of NH}_3 = \frac{1}{1 + 10^{(pK - pH)}}$$

where:

$$pK = 9.245 + 0.116(I) + 0.0324(298 - T) + \frac{0.0415(P)}{(T)}$$

$$I = \text{Molal ionic strength of saltwater} = \frac{19.9273(S)}{(1,000 - 1.005109(S))}$$

$S$  = Salinity (parts per thousand)

$T$  = Temperature (Kelvin)

$P$  = Pressure (one atmosphere)

For salinity < 1 ppt:

$$pK = 0.09018 + 2729.92/T$$

where:

$T$  = Temperature (Kelvin)

The median and 90th percentile un-ionized ammonia fractions were then used to express the annual average and daily maximum un-ionized objectives as chronic and acute total ammonia criteria. This approach is consistent with U.S. EPA guidance on translating dissolved metal water quality objectives to total recoverable metal water quality objectives (U.S. EPA, 1996, *The Metals Translator: Guidance for Calculating a Total Recoverable Limit from a Dissolved Criterion*, EPA Publication 823-B96-007). The resulting total ammonia chronic and acute water quality objectives are 1.0 mg/L and 3.9 mg/L as nitrogen.

- ii. **Dioxin-TEQ.** The narrative bioaccumulation objective (Basin Plan § 3.3.2) states, “Many pollutants can accumulate on particulates, in sediments, or bioaccumulate in fish and other aquatic organisms. 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.” Because 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, 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 Pablo 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 water quality-based effluent limits for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme” (Fed. Reg. Vol. 65, No. 97, pages 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. § 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  $1.4 \times 10^{-8}$  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.

- iii. Chronic Toxicity.** The narrative toxicity objective (Basin Plan § 3.3.18) 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.” It further 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.”
- For this Order, the narrative objective is translated into a numeric criterion of 1.0 chronic toxicity unit (TUC). At 1.0 TUC, there is no observable detrimental effect when an indicator organism is exposed to 100 percent effluent; therefore, 1.0 TUC 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 § 3.3.3, “Step 3: Decision Criteria for Permit Limit Development”), U.S. EPA recommends that 1.0 TUC be used as a criterion continuous concentration (typically a four-day average). It further states that reasonable potential is shown where an effluent is projected to cause an excursion above the criterion continuous concentration. This document applies here as guidance because it directly addresses effluent characterization for toxicity.
- 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 criteria applicable to “organisms only” apply to the receiving waters of this discharge because total dissolved solids levels exceed 3,000 mg/L and thereby meet an exception to State Water Board Resolution No. 88-63.
- 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 Suisun Bay and the Sacramento-San Joaquin Delta. This includes the receiving water for this Discharger.
- 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 water with salinities in 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 criteria (the latter calculated based on ambient hardness) for each substance.

Salinity data generated through the RMP at the nearest sampling station, Sacramento River sampling station (BG20), between 1993 and 2009 indicate that the salinity was less than 1 ppt in 80 percent of the samples and greater than 10 ppt in 0 percent of the samples. Sampling station BG20 is representative of Suisun Bay; thus Suisun Bay is estuarine in the vicinity of the discharge, and the reasonable potential analysis and effluent limitations in this Order are based on the more stringent of the fresh and saltwater objectives.

- f. **Receiving Water Hardness.** Hardness values collected by the RMP at the Sacramento River sampling station (BG20) from February 1994 through August 2015 range from 43 to 1,060 mg/L as calcium carbonate (CaCO<sub>3</sub>). This Order uses a hardness of 98 mg/L as CaCO<sub>3</sub>, which is the geometric mean calculated after censoring out values greater than 400 mg/L CaCO<sub>3</sub>.
- 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 water quality objectives.

CTR default translators were used for all metals other than copper, nickel, and zinc. Basin Plan Table 7.2.1-2 sets forth site-specific copper translators. The Clean Estuary Partnership’s *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (March 2005) contains site-specific nickel translators. The Regional Water Board calculated site-specific zinc translators according to the procedure in SIP section 1.4.1 using zinc and TSS data collected from 1993 to 2001 at the Sacramento River RMP station (BG20). These translators are listed in the table below:

**Table F-9. Site-Specific Translators**

Parameter	Site Specific Translators	
	Acute	Chronic
Copper	0.66	0.38
Nickel	0.57	0.27
Zinc	0.32	0.12

**3. Need for WQBELs (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 reasonable potential analysis below applies to the discharge of treatment system effluent at Discharge Point



No. 001. Stormwater discharges at Discharge Point Nos. 001 and 003 through 015 are subject to technology-based limits as described in Fact Sheet section IV.C.3 and the requirements of Attachment S, which include implementation of BMPs in accordance with 40 C.F.R. section 122.44(k).

- a. Available Information.** This Order's reasonable potential analysis is based on effluent data from September 2014 through August 2017, which includes data collected after Units 1 through 4 were shut down and data collected after Facility decommissioning, and ambient background data from the Sacramento River RMP station (BG20) from March 1993 through August 2015. The RMP data is summarized in the *San Francisco Bay California Toxics Rule Priority Pollutant Ambient Water Monitoring Report* (February 2017), supplemented by Bay Area Clean Water Agencies data from *San Francisco Bay Ambient Water Monitoring Interim Report* (2003) and *Ambient Water Monitoring: Final CTR Sampling Update* (2004). These latter reports contain monitoring results from 2002 and 2003 for priority pollutants the RMP did not monitor at the time.

SIP section 1.4.3 requires that background water quality data be representative of the ambient receiving water that will mix with the discharge. The Sacramento River RMP monitoring station (BG20), relative to other RMP stations, best fits SIP guidance because it is relatively near the discharge location (less than 5 miles) and has similar characteristics to the receiving water, Suisun Bay.

This Order does not contain WQBELs for constituents that do not demonstrate reasonable potential; however, Provision VI.C.2 of this Order still requires monitoring for such pollutants. If concentrations are found to have increased significantly, Provision VI.C.2 of this 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, Dioxin-TEQ, and Ammonia**

- 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. SIP section 1.3 applies to priority pollutants and is used here for dioxin-TEQ and ammonia as guidance. 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. Basin Plan section 7.2.1.2 requires copper WQBELs.

**Table F-10. Priority Pollutant Reasonable Potential Analysis**

CTR No.	Pollutants	C or Governing Criterion or Objective (µg/L)	MEC or Minimum DL (µg/L) <sup>[1][2]</sup>	B or Minimum DL (µg/L) <sup>[1][2]</sup>	RPA Result <sup>[3]</sup>
1	Antimony	4,300	0.66	0.34	No
2	Arsenic	36	0.67	3.7	No
3	Beryllium	No Criteria	<0.051	0.045	U
4	Cadmium	1.1	0.10	0.32	No
5a	Chromium (III)	204	1.0	80	No
5b	Chromium (VI)	11	1.0	80	No
<b>6</b>	<b>Copper</b>	<b>14</b>	<b>4.7</b>	<b>9.9</b>	<b>Yes<sup>[4]</sup></b>
7	Lead	3.1	1.3	2.3	No
8	Mercury	---	---	---	<sup>[5]</sup>
9	Nickel	30	2.5	22	No
10	Selenium	5.0	0.21	0.077	<sup>[5]</sup>
11	Silver	2.2	<0.025	0.057	No
12	Thallium	6.3	<0.026	0.039	No
13	Zinc	346	86	18	No
14	Cyanide	9.4	<1.0	0.90	No <sup>[6]</sup>
15	Asbestos	No Criteria	Unavailable	<1.0	U
16	2,3,7,8-TCDD	1.4E-08	<8.0E-7	6.0E-09	U
	Dioxin TEQ	1.4E-08	Unavailable	0.042	U
17	Acrolein	780	<2.5	<0.50	No
18	Acrylonitrile	0.66	<1.0	<0.020	U
19	Benzene	71	<0.051	<0.050	No
20	Bromoform	360	<0.25	<0.15	No
21	Carbon Tetrachloride	4.4	<0.50	0.060	No
22	Chlorobenzene	21,000	<0.069	<0.18	No
23	Chlorodibromomethane	34	0.086	<0.050	No
24	Chloroethane	No Criteria	<0.31	<0.38	U
25	2-Chloroethylvinyl ether	No Criteria	<0.50	<0.28	U
26	Chloroform	No Criteria	0.10	<0.19	U
27	Dichlorobromomethane	46	<0.20	<0.050	No
28	1,1-Dichloroethane	No Criteria	<0.060	<0.050	U
29	1,2-Dichloroethane	99	<0.090	0.040	No
30	1,1-Dichloroethylene	3.2	<0.086	<0.21	No
31	1,2-Dichloropropane	39	<0.055	<0.050	No
32	1,3-Dichloropropylene	1,700	<0.070	<0.16	No

CTR No.	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 Result [3]
33	Ethylbenzene	29,000	<0.050	<0.26	No
34	Methyl Bromide	4,000	<0.16	<0.30	No
35	Methyl Chloride	No Criteria	<0.13	<0.30	U
36	Methylene Chloride	1,600	0.45	<0.40	No
37	1,1,2,2-Tetrachloroethane	11	<0.11	<0.050	No
38	Tetrachloroethylene	8.9	<0.082	<0.050	No
39	Toluene	200,000	0.10	<0.19	No
40	1,2-Trans-Dichloroethylene	140,000	<0.060	<0.50	No
41	1,1,1-Trichloroethane	No Criteria	<0.050	<0.19	U
42	1,1,2-Trichloroethane	42	<0.080	<0.050	No
43	Trichloroethylene	81	<0.047	<0.20	No
44	Vinyl Chloride	525	<0.070	<0.25	No
45	2-Chlorophenol	400	<0.27	<0.70	No
46	2,4-Dichlorophenol	790	<0.29	<1.3	No
47	2,4-Dimethylphenol	2,300	<0.10	<0.80	No
48	2-Methyl- 4,6-Dinitrophenol	765	<5.1	<0.60	No
49	2,4-Dinitrophenol	14,000	<0.89	<0.70	No
50	2-Nitrophenol	No Criteria	<1.4	<0.80	U
51	4-Nitrophenol	No Criteria	<1.7	<0.50	U
52	3-Methyl 4-Chlorophenol	No Criteria	<0.19	<0.80	U
53	Pentachlorophenol	7.9	<0.51	<0.50	No
54	Phenol	4,600,000	<0.35	<0.50	No
55	2,4,6-Trichlorophenol	6.5	<0.24	<0.97	No
56	Acenaphthene	2,700	<0.25	0.0020	No
57	Acenaphthylene	No Criteria	<0.27	0.00030	U
58	Anthracene	110,000	<0.15	0.00020	No
59	Benzidine	0.00054	<0.30	<0.00030	U
60	Benzo(a)Anthracene	0.049	<0.16	0.0010	U
61	Benzo(a)Pyrene	0.049	<0.17	0.0010	U
62	Benzo(b)Fluoranthene	0.049	<0.16	0.0020	U
63	Benzo(ghi)Perylene	No Criteria	<0.18	0.0030	U
64	Benzo(k)Fluoranthene	0.049	<0.20	0.0010	U
65	Bis(2-Chloroethoxy)Methane	No Criteria	<0.31	<0.30	U
66	Bis(2-Chloroethyl)Ether	1.4	<0.25	<0.30	No
67	Bis(2-Chloroisopropyl)Ether	170,000	<0.29	<0.60	No
68	Bis(2-Ethylhexyl)Phthalate	5.9	1.0	0.68	No
69	4-Bromophenyl Phenyl Ether	No Criteria	<0.17	<0.23	U
70	Butylbenzyl Phthalate	5,200	<0.30	<0.50	No
71	2-Chloronaphthalene	4,300	<0.26	<0.30	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	<0.20	<0.30	U
73	Chrysene	0.049	<0.18	0.0010	U
74	Dibenzo(a,h)Anthracene	0.049	<0.19	0.0010	U
75	1,2-Dichlorobenzene	17,000	<0.24	<0.27	No
76	1,3-Dichlorobenzene	2,600	<0.22	<0.18	No

CTR No.	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 Result [3]
77	1,4-Dichlorobenzene	2,600	<0.22	<0.18	No
78	3,3 Dichlorobenzidine	0.077	<0.14	<0.00020	U
79	Diethyl Phthalate	120,000	<0.15	<0.20	No
80	Dimethyl Phthalate	2,900,000	<0.18	<0.20	No
81	Di-n-Butyl Phthalate	12,000	0.62	1.7	No
82	2,4-Dinitrotoluene	9.1	<0.17	<0.27	No
83	2,6-Dinitrotoluene	No Criteria	<0.20	<0.29	U
84	Di-n-Octyl Phthalate	No Criteria	<0.28	<0.38	U
85	1,2-Diphenylhydrazine	0.54	<0.16	0.0090	No
86	Fluoranthene	370	<0.18	0.0030	No
87	Fluorene	14,000	<0.20	0.0010	No
88	Hexachlorobenzene	0.00077	<0.18	0.00010	U
89	Hexachlorobutadiene	50	<0.25	<0.30	No
90	Hexachlorocyclopentadiene	17,000	<1.2	<0.30	No
91	Hexachloroethane	8.9	<0.30	<0.20	No
92	Indeno(1,2,3-cd)Pyrene	0.049	<0.19	0.0010	U
93	Isophorone	600	<0.33	<0.30	No
94	Naphthalene	No Criteria	<0.25	0.0080	U
95	Nitrobenzene	1,900	<0.33	<0.25	No
96	N-Nitrosodimethylamine	8.1	Unavailable	<0.30	No
97	N-Nitrosodi-n-Propylamine	1.4	<0.36	<0.00020	No
98	N-Nitrosodiphenylamine	16	<0.18	<0.0010	No
99	Phenanthrene	No Criteria	<0.22	0.0030	U
100	Pyrene	11,000	<0.25	0.0050	No
101	1,2,4-Trichlorobenzene	No Criteria	<0.21	<0.30	U
102	Aldrin	0.00014	<0.28	0.000010	U
103	Alpha-BHC	0.013	<0.31	0.00030	U
104	Beta-BHC	0.046	<0.69	0.00010	U
105	Gamma-BHC	0.063	<0.45	0.0010	U
106	Delta-BHC	No Criteria	<0.14	0.000040	U
107	Chlordane	0.00059	<2.3	0.00020	U
108	4,4'-DDT	0.00059	<0.17	0.00010	U
109	4,4'-DDE	0.00059	<0.18	0.00030	U
110	4,4'-DDD	0.00084	<0.11	0.0010	U
111	Dieldrin	0.00014	<0.14	0.00030	U
112	Alpha-Endosulfan	0.0087	<0.11	0.00040	U
113	beta-Endosulfan	0.0087	<0.46	<0.0040	U
114	Endosulfan Sulfate	240	<0.33	0.000040	No
115	Endrin	0.0023	<0.18	0.00030	U
116	Endrin Aldehyde	0.81	<0.53	0.000020	No
117	Heptachlor	0.00021	<0.41	<0.0050	U
118	Heptachlor Epoxide	0.00011	<0.25	0.000010	U
119-125	PCBs sum	---	---	---	[5]

CTR No.	Pollutants	C or Governing Criterion or Objective (µg/L)	MEC or Minimum DL (µg/L) <sup>[1][2]</sup>	B or Minimum DL (µg/L) <sup>[1][2]</sup>	RPA Result <sup>[3]</sup>
126	Toxaphene	0.00020	<2.0	<0.30	U
	Ammonia, Total as N (mg/L)	1.0	0.044	0.23	No

Abbreviations:

MEC = maximum effluent concentration  
 B = background concentration  
 C = water quality criterion or objective  
 DL = detection level

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 Result = 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] Basin Plan section 7.2.1.2 requires copper WQBELs to ensure that use of copper site-specific objectives is consistent with antidegradation policies.
- [5] 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, PCBs, and selenium 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. Furthermore, this Order’s technology-based prohibition on discharge of PCBs (Table 4) is more stringent than any water quality-based effluent limit. A TMDL has also been developed for selenium in North San Francisco Bay. Basin Plan section 7.2.4.5 finds that industrial dischargers (except for petroleum refineries) have no reasonable potential to cause or contribute to the selenium impairment in San Francisco Bay segments and, therefore, are not required to have numeric effluent limitations.
- [6] Pursuant to Basin Plan section 4.7.2.2, cyanide effluent limits are not required because (a) cyanide has not been detected in effluent, (b) the Discharger does not disinfect the effluent, and (c) cyanide is not used in any Facility process. Because cyanide effluent limits are not required, no monitoring and surveillance program (i.e., “cyanide action plan”) is required.

- c. **Acute Toxicity.** Basin Plan section 3.3.18 states, “There shall be no acute toxicity in ambient waters.” Basin Plan section 4.5.5.3.1 requires acute toxicity monitoring and effluent limitations. The minimum percent survival detected by acute toxicity monitoring at Monitoring Location EFF-001G from November 2012 to April 2017 was 70 percent. Also, the wastewater treatment chemicals used to enhance mercury treatment are potential aquatic toxins. Therefore, there is reasonable potential for the discharge to cause or contribute to an exceedance of the water quality objective for acute toxicity, and an effluent limit is required to ensure that the acute toxicity water quality objective is met in Suisun Bay. In addition, Basin Plan Table 4-3 requires acute toxicity effluent limits.
- d. **Chronic Toxicity.** Basin Plan section 3.3.18 states “There shall be no chronic toxicity in ambient waters.” The previous order did not impose a limit for chronic toxicity or require monitoring. Therefore, there is insufficient data to determine reasonable potential for the discharge to cause or contribute to an exceedance of the chronic toxicity water quality objective. This Order therefore requires chronic toxicity screening in accordance with MRP section V.B.
- e. **pH.** Due to the complexity of the discharge at Discharge Point No. 001, there is a reasonable potential for this discharge to exceed the water quality objective for pH (Basin Plan § 3.3.9). This Order imposes a water quality-based pH effluent limit of 6.5 to 8.5 pursuant to Basin Plan Table 4-2 (for shallow-water discharges from all treatment

facilities). This limit is more stringent than a technology-based pH limit of 6.0 to 9.0 based on the ELGs would be (see Fact Sheet § IV.C.2).

- 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.

#### 4. WQBEL Calculations

WQBELs were developed for the pollutants or pollutant parameters determined to have reasonable potential to cause or contribute to exceedances of water quality objectives. With the exception of acute toxicity (discussed below), the WQBELs are based on the procedures specified in SIP section 1.4.

- a. **Calculations.** Discharge Point No. 001 is a shoreline outfall to the shallow water of Suisun Bay; this Order does not establish any mixing zone, thus no dilution credit is granted. Average monthly effluent limits (AMELs) and maximum daily effluent limits (MDELs) were calculated for copper as shown below:

**Table F-11. Water Quality-Based Effluent Limit Calculations**

POLLUTANTS	Copper
Units	µg/L
Basis and Criteria type	Basin Plan SSO
Criteria –Acute	-----
Criteria -Chronic	-----
SSO Criteria-Acute	9.4
SSO Criteria -Chronic	6.0
Water Effects ratio (WER)	1
Lowest WQO	6.0
Site Specific Translator – MDEL	0.66
Site Specific Translator – AMEL	0.38
Dilution Factor (D) (if applicable)	0
No. of samples per month	4
Aquatic life criteria analysis required? (Y/N)	Y
HH criteria analysis required? (Y/N)	N
Applicable Acute WQO	14
Applicable Chronic WQO	16
HH criteria	-----
Background (Maximum Conc for Aquatic Life calc)	9.9

POLLUTANTS	Copper
Units	µg/L
Background (Average Conc for Human Health calc)	-----
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N
ECA acute	14
ECA chronic	16
ECA HH	----
No. of data points <10 or at least 80% of data reported non detect? (Y/N)	Y
Average of effluent data points	4.6
Std. Dev. Of effluent data points	----
CV calculated	----
CV selected	0.60
ECA acute mult99	0.32
ECA chronic mult99	0.53
LTA acute	4.6
LTA chronic	8.3
Minimum of LTAs	4.6
AMEL mult95	1.6
MDEL mult99	3.1
AMEL (aquatic life)	7.1
MDEL (aquatic life)	14
MDEL/AMEL Multiplier	2.0
AMEL (human health)	-----
MDEL (human health)	-----
Min. of AMEL for Aq. life vs HH	7.1
Min. of MDEL for Aq. Life vs HH	14
Previous order AMEL	None
Previous order MDEL	None
Final limit - AMEL	7.1
Final limit - MDEL	14

**b. Acute Toxicity.** This Order’s acute toxicity effluent limitation is based on Basin Plan Table 4-3’s acute toxicity effluent limit requirement for intermittent discharges. This limit is appropriate because the Discharger no longer discharges continuously.

**E. 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 previously in the permit, with some exceptions under which effluent limitations may be relaxed. Ceasing power plant

operations at the Facility and, consequently, most discharges constitutes a material and substantial alteration to the permitted Facility relative to the circumstances the previous order covered. CWA sections 402(o)(2)(A) allows backsliding within the context of such alterations. The limits this Order retains are at least as stringent as those in the previous order.

This Order does not retain the previous order's technology- or water quality-based effluent limitations at Discharge Point No. 001, other than those for pH and PCBs, because the wastewater discharges those limits were based on no longer exist. This Order also does not retain the previous order's interim limits because no final limits were established. Eliminating WQBELs with no reasonable potential is consistent with State Water Board Order No. WQ 2001-16.

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. The previous order was adopted in accordance with the antidegradation policies and thus serves as the baseline by which to measure whether degradation will occur. This Order substantially reduces the permitted flow and imposes limits at least as stringent as those in the previous order for the wastewaters still generated onsite; it also prohibits several previously authorized discharges. This Order does not allow for a reduced level of treatment relative to the previous order. Thus, this Order will substantially reduce the mass of pollutants discharged and will not degrade Suisun Bay water quality relative to its existing quality, and no findings justifying degradation are necessary.
3. **Stringency of Requirements for Individual Pollutants.** This Order contains technology-based limits for individual pollutants and water quality-based limits on pH, copper, and acute toxicity. 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. 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 this Order are based on Basin Plan narrative and numeric water quality objectives. The receiving water limitation in section V.C of this 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.

Attachment S contains provisions that are consistent with those specified in the State Water Board's *General Permit for Stormwater Discharges Associated with Industrial Activities* (NPDES No. CAS000001). This includes requirements for the Discharger to prepare a Stormwater Pollution Prevention Plan, comply with stormwater action levels, and submit an annual stormwater report.

### **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 Water Code 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. Other Special Provisions

- a. **Copper.** 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. This provision requires the Discharger to conduct an inventory of potential copper sources and implement pretreatment, source control, and pollution prevention for identified sources. Additional actions may be necessary depending on the three-year rolling mean copper concentration in Suisun Bay. Data the San Francisco Estuary Institute compiled for 2011 through 2015 indicate no degradation of San Francisco Bay water quality with respect to copper.
- b. **Mercury Reduction and Influent Annual Report.** This provision is necessary to evaluate the effectiveness of the Discharger's mercury control efforts and to determine whether an individual NPDES permit continues to be appropriate. If mercury in treatment plant influent is consistently below the concentration-based triggers in Order No. R2-2017-0041 (NPDES No. CA0038849), Table 7, mercury treatment, such as addition of the wastewater treatment chemicals, may no longer be necessary and coverage under the State Water Board's *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES Permit No. CAS000001) may be appropriate.
- c. **Diversion of Treatment System Effluent to Discharge Point No. 003.** This provision is necessary if the Discharger wishes to divert the treatment system discharge from Discharge Point No. 001 to Discharge Point No. 003, thereby moving the discharge from Suisun Bay to Willow Creek (see Fact Sheet § II.A). This provision requires the Discharger to document compliance with federal and State antidegradation requirements.
- d. **Change in Control or Ownership of Discharge Point No. 003.** The Discharger may sell the Facility property that includes Discharge Point No. 003 and its drainage area, as described in Fact Sheet section II.C. This provision is based on 40 C.F.R. part 122.63(d) and is required to ensure that the discharge from Discharge Point No. 003 continues to be monitored and subject to appropriate permit requirements in the event of such sale and transfer.

## 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 monitoring at Monitoring Location INF-001G is necessary to understand the pollutant load that could be discharged without treatment, and to evaluate whether the discharges could be authorized under the State Water Board's *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES Permit No. CAS000001).

2. **Effluent Monitoring.** Effluent monitoring at Monitoring Locations EFF-001G, EFF-001H, and EFF-003 through EFF-015 is necessary to evaluate compliance with this Order’s effluent limitations and conduct future reasonable potential analyses.
3. **Toxicity Testing.** Acute and chronic toxicity tests are necessary to evaluate compliance with the acute toxicity effluent limitations and to conduct future reasonable potential analyses. Consistent with Basin Plan section 4.5.5.3.4, the Discharger must conduct a chronic toxicity screening phase study, as described in MRP Appendix E-1, prior to permit reissuance.
4. **Receiving Water Monitoring.** The Discharger is required to continue participating in the RMP, which involves collecting data on pollutants and toxicity in San Francisco Bay water, sediment, and biota. This monitoring is necessary to characterize the receiving water and the effects of the discharges this Order authorizes.
5. **Other Monitoring Requirements.** Pursuant to CWA section 308, U.S. EPA requires dischargers to participate in a Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program. The program annually evaluates the analytical abilities of laboratories that perform or support NPDES permit-required monitoring. The program applies to discharger laboratories and contract laboratories. There are two options to comply: (1) dischargers can obtain and analyze DMR-QA samples, or (2) pursuant to a waiver U.S. EPA issued to the State Water Board, dischargers can submit results from the most recent Water Pollution Performance Evaluation Study. Dischargers must submit results annually to the State Water Board, which then forwards the results to U.S. EPA.

**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-12. Monitoring Requirements Summary**

Parameter	Influent INF-001G	Effluent EFF-001G	Effluent EFF-001H and EFF-003 through -015	Receiving Water
Flow	---	Continuous/D	1/Month	Support RMP
pH	---	1/Month	1/Quarter	Support RMP
TSS	---	1/Month	1/Quarter	---
Oil and Grease	---	1/Quarter	1/Quarter	---
Copper, Total Recoverable	---	1/Month	---	---
PCBs, Total (as Aroclors)	---	1/Year	---	---
Acute Toxicity	---	1/Month	---	Support RMP
Chronic Toxicity	---	Once	---	Support RMP
Remaining Priority Pollutants	---	1/Year	---	Support RMP
Mercury	1/Quarter	1/Month	---	---
Visual Observations	---	---	1/Month including at each sampling event	---

Sampling Frequencies:

Continuous/D	= measured continuously, and recorded and reported daily
1/Month	= once per month
1/Quarter	= once per quarter
1/Year	= once per year
Once	= once per permit term.

## 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 *East Bay 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 John Madigan.

For full staff response and Regional Water Board consideration, the written comments were due at the Regional Water Board office by 5:00 p.m. on April 12, 2018.

**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: May 9, 2018  
Time: 9:00 a.m.  
Location: Elihu Harris State Office Building  
1515 Clay Street, 1st Floor Auditorium  
Oakland, CA 94612

Contact: John Madigan, (510) 622-2405, [John.Madigan@waterboards.ca.gov](mailto:John.Madigan@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](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 8:00 a.m. and 5:00 p.m. (except noon to 1:00 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 John Madigan, at (510) 622-2405 or [John.Madigan@waterboards.ca.gov](mailto:John.Madigan@waterboards.ca.gov).

**ATTACHMENT F-1**

**Pittsburg Generating Station  
Violations of Mercury and PCBs Watershed Permit<sup>1</sup> Mercury Limits  
January 2010 through August 2017**

<b>Violation Date</b>	<b>CIWQS Violation ID #</b>	<b>Limitation</b>	<b>Effluent Limit, µg/L</b>	<b>Reported Value, µg/L</b>
8/31/2010	930765	Monthly Average	0.079	0.11
12/17/2010	930767	Daily Maximum	0.12	0.17
12/31/2010	930766	Monthly Average	0.079	0.11
10/13/2011	930768	Daily Maximum	0.12	0.35
10/31/2011	930769	Monthly Average	0.079	0.19
1/23/2012	930770	Daily Maximum	0.12	0.33
1/31/2012	930771	Monthly Average	0.079	0.20
2/21/2012	930772	Daily Maximum	0.12	0.63
2/29/2012	930773	Monthly Average	0.079	0.20
3/2/2012	930774	Daily Maximum	0.12	1.9
3/31/2012	930775	Monthly Average	0.079	0.98
4/25/2012	930776	Daily Maximum	0.12	0.38
4/30/2012	930777	Daily Maximum	0.12	0.16
4/30/2012	930778	Monthly Average	0.079	0.23
6/4/2012	942303	Daily Maximum.	0.12	0.16
6/30/2012	942304	Monthly Average	0.079	0.16
8/23/2012	942305	Daily Maximum	0.12	1.1
8/28/2012	942306	Daily Maximum	0.12	0.99
8/29/2012	942307	Daily Maximum	0.12	1.1
8/30/2012	942309	Daily Maximum	0.12	0.80
8/31/2012	942311	Daily Maximum	0.12	1.2
8/31/2012	942312	Monthly Average	0.079	1.0
9/5/2012	942315	Daily Maximum	0.12	0.48
9/11/2012	942316	Daily Maximum	0.12	0.63
9/12/2012	942317	Daily Maximum	0.12	0.33
9/17/2012	942318	Daily Maximum	0.12	0.52
9/19/2012	942319	Daily Maximum	0.12	0.16
9/20/2012	942320	Daily Maximum	0.12	0.29
9/21/2012	942321	Daily Maximum	0.12	0.39
9/22/2012	942323	Daily Maximum	0.12	0.48
9/23/2012	942324	Daily Maximum	0.12	0.54
9/24/2012	942325	Daily Maximum	0.12	0.58
9/27/2012	942327	Daily Maximum	0.12	0.17

<sup>1</sup> NPDES Permit CA003884.

<b>Violation Date</b>	<b>CIWQS Violation ID #</b>	<b>Limitation</b>	<b>Effluent Limit, µg/L</b>	<b>Reported Value, µg/L</b>
9/30/2012	942328	Monthly Average	0.079	0.42
10/2/2012	942329	Daily Maximum	0.12	2.0
10/5/2012	942331	Daily Maximum	0.12	0.35
10/18/2012	942332	Daily Maximum	0.12	0.61
10/23/2012	942334	Daily Maximum	0.12	0.19
10/24/2012	942335	Daily Maximum	0.12	0.15
10/29/2012	942337	Daily Maximum	0.12	0.56
10/31/2012	942338	Monthly Average	0.079	0.64
11/8/2012	942340	Daily Maximum	0.12	0.40
11/13/2012	942341	Daily Maximum	0.12	0.20
11/16/2012	942343	Daily Maximum	0.12	0.24
11/17/2012	942344	Daily Maximum	0.12	0.18
11/20/2012	942345	Daily Maximum	0.12	0.15
11/26/2012	942347	Daily Maximum	0.12	0.25
11/30/2012	942348	Monthly Average	0.079	0.13
6/21/2016	1010920	Daily Maximum	0.12	0.22
6/29/2016	1010921	Daily Maximum	0.12	0.31
6/30/2016	1010919	Monthly Average	0.079	0.26

## **ATTACHMENT G**

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

November 2017



## Contents

<b>I. STANDARD PROVISIONS – PERMIT COMPLIANCE</b> .....	<b>G-1</b>
A. Duty to Comply.....	G-1
B. Need to Halt or Reduce Activity Not a Defense.....	G-1
C. Duty to Mitigate.....	G-1
1. Contingency Plan.....	G-1
2. Spill Prevention Plan.....	G-2
D. Proper Operation and Maintenance.....	G-2
1. Operation and Maintenance Manual.....	G-2
2. Wastewater Facilities Status Report.....	G-2
3. Proper Supervision and Operation of Publicly-Owned Treatment Works (POTWs).....	G-2
E. Property Rights.....	G-2
F. Inspection and Entry.....	G-2
G. Bypass.....	G-2
H. Upset.....	G-2
I. Other.....	G-3
<b>II. STANDARD PROVISIONS – PERMIT ACTION</b> .....	<b>G-3</b>
<b>III. STANDARD PROVISIONS – MONITORING</b> .....	<b>G-3</b>
A. Sampling and Analyses.....	G-3
1. Certified Laboratories.....	G-3
2. Minimum Levels.....	G-3
3. Monitoring Frequency.....	G-3
B. Standard Observations.....	G-5
1. Receiving Water Observations.....	G-5
2. Wastewater Effluent Observations.....	G-6
3. Beach and Shoreline Observations.....	G-6
4. Waste Treatment and/or Disposal Facility Periphery Observations.....	G-6
<b>IV. STANDARD PROVISIONS – RECORDS</b> .....	<b>G-6</b>
A. Records to be Maintained.....	G-6
B. Records of Monitoring.....	G-7
1. Analytical Information.....	G-7
2. Disinfection Process.....	G-7
3. Wastewater Treatment Process Solids.....	G-7
4. Treatment Process Bypasses.....	G-7
5. Treatment Facility Overflows.....	G-8
C. Claims of Confidentiality.....	G-8
<b>V. STANDARD PROVISIONS – REPORTING</b> .....	<b>G-8</b>
A. Duty to Provide Information.....	G-8
B. Signatory and Certification Requirements.....	G-8
C. Monitoring Reports.....	G-8
1. Self-Monitoring Reports.....	G-8
D. Compliance Schedules.....	G-11
E. Twenty-Four Hour Reporting.....	G-11
1. Oil or Other Hazardous Material Spills.....	G-11
2. Unauthorized Municipal Wastewater Treatment Plant Discharges.....	G-12
F. Planned Changes.....	G-13
G. Anticipated Noncompliance.....	G-13
H. Other Noncompliance.....	G-13
I. Other Information.....	G-13

**VI. STANDARD PROVISION – ENFORCEMENT ..... G-13**  
**VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS ..... G-13**  
**VIII. DEFINITIONS ..... G-13**

## REGIONAL STANDARD PROVISIONS, AND MONITORING AND REPORTING REQUIREMENTS

### APPLICABILITY

This document supplements the requirements of Federal Standard Provisions (Attachment D). For clarity, these provisions are arranged using to the same headings as those used in 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** – Supplement to Attachment D, Provision I.C.

**1. Contingency Plan.** The Discharger shall maintain a Contingency Plan as prudent in accordance with current 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 (see Provision I.C.2, below) into one document. In accordance with Regional Water Board Resolution No. 74-10, discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below may 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, provide for the following:

- a. Sufficient personnel for continued facility operation and maintenance during employee strikes or strikes against contractors providing services;
- b. Maintenance of adequate chemicals or other supplies, and spare parts necessary for continued facility operations;
- c. Emergency standby power;
- d. Protection against vandalism;
- e. Expeditious action to repair failures of, or damage to, equipment, including any sewer lines;
- f. Reporting of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges; and
- g. Maintenance, replacement, and surveillance of physical condition of equipment and facilities, including any sewer lines.

- 2. Spill Prevention Plan.** The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and to minimize the effects of any such discharges. The Spill Prevention Plan shall do the following:
  - a. Identify the possible sources of accidental discharge, untreated or partially-treated waste bypass, and polluted drainage;
  - b. State when current facilities and procedures became operational and evaluate their effectiveness; and
  - c. Predict the effectiveness of any proposed facilities and procedures and provide an implementation schedule with interim and final dates when the proposed facilities and procedures will be constructed, implemented, or operational.

**D. Proper Operation and Maintenance – Supplement to Attachment D, Provision I.D**

- 1. Operation and Maintenance Manual.** The Discharger shall maintain an Operation and Maintenance 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 Operation and Maintenance Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The Operation and Maintenance 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 maintain a Wastewater Facilities Status Report and regularly review, revise, or update it, as necessary. 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 Title 23, section 3680, of the California Code of Regulations.

**E. Property Rights – Not Supplemented**

**F. Inspection and Entry – Not Supplemented**

**G. Bypass – Not Supplemented**

**H. Upset – Not Supplemented**

**I. Other – Addition to 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. 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 shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

**II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented**

**III. STANDARD PROVISIONS – MONITORING**

**A. Sampling and Analyses – Supplement to Attachment D, Provisions III.A and III.B**

1. **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. **Minimum Levels.** For the 126 priority pollutants, the Discharger should use the analytical methods listed in Table B unless the Monitoring and Reporting Program (MRP, Attachment E) requires a particular method or minimum level (ML). All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.
3. **Monitoring Frequency.** The MRP specifies the minimum sampling and analysis schedule.

**a. Sample Collection Timing**

- i. The Discharger shall collect influent samples on varying days selected at random and shall not include any plant recirculation or other sidestream wastes, unless otherwise stipulated in the MRP. The Executive Officer may approve an alternative influent sampling plan if it is representative of plant influent and complies with all other permit requirements.
- ii. The Discharger shall collect effluent samples on days coincident with influent sampling, unless otherwise stipulated by the MRP. If influent sampling is not required, the Discharger shall collect effluent samples on varying days selected at random, unless otherwise stipulated in the MRP. The Executive Officer may approve an alternative effluent sampling plan if it is representative of plant discharge and in compliance with all other permit requirements.
- iii. The Discharger shall collect effluent grab samples during periods of daytime maximum peak flows (or peak flows through secondary treatment units for facilities that recycle effluent).

- iv. Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay the MRP requires. During the course of the bioassay, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event that a bioassay result does not comply with effluent limitations, the Discharger shall analyze the retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limitations.
  - (a) The Discharger shall perform bioassays on final effluent samples; when chlorine is used for disinfection, bioassays shall be performed on effluent after chlorination and dechlorination; and
  - (b) The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet effluent limitations.
- b. **Conditions Triggering Accelerated Monitoring**
  - i. **Average Monthly Effluent Limitation Exceedance.** If the results from two consecutive samples of a constituent monitored in a particular month exceed the average monthly effluent limitation for any parameter (or if the required sampling frequency is once per month or less and the monthly sample exceeds the average monthly effluent limitation), 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 complies with the average monthly effluent limitation.
  - ii. **Maximum Daily Effluent Limitation Exceedance.** If a sample result exceeds a maximum daily effluent limitation, the Discharger shall, within 24 hours after the result is received, increase its sampling frequency to daily until the results from two samples collected on consecutive days show compliance with the maximum daily effluent limitation.
  - iii. **Acute Toxicity.** If final or intermediate results of an acute bioassay indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay is less than 70 percent), the Discharger shall initiate a new test as soon as practical or as described in applicable State Water Board plan provisions that become effective after adoption of these Regional Standard Provisions. The Discharger shall investigate the cause of the mortalities and report its findings in the next self-monitoring report.
  - iv. **Chlorine.** 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 limitation is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring.
  - v. **Bypass.** Except as indicated below, if a Discharger bypasses any portion of its treatment facility, it shall monitor flows and collect samples at affected discharge

points and analyze samples for all constituents with effluent limitations on a daily basis for the duration of the bypass. The Discharger need not accelerate chronic toxicity monitoring. The Discharger also need not collect and analyze samples for mercury, dioxin-TEQ, and PCBs after the first day of the bypass. The Discharger may satisfy the accelerated acute toxicity monitoring requirement by conducting a flow-through test or static renewal test that captures the duration of the bypass (regardless of the method specified in the MRP). If bypassing disinfection units only, the Discharger shall only monitor bacteria indicators daily.

**(a) Bypass for Essential Maintenance.** If a Discharger bypasses a treatment unit for essential maintenance pursuant to Attachment D section I.G.2, the Executive Officer may reduce the accelerated monitoring requirements above if the Discharger (i) monitors effluent at affected discharge points on the first day of the bypass for all constituents with effluent limitations, except chronic toxicity; and (ii) identifies and implements measures to ensure that the bypass will continue to comply with effluent limitations.

**(b) Approved Wet Weather Bypasses.** If a Discharger bypasses a treatment unit or permitted outfall during wet weather with Executive Officer approval pursuant to Attachment D section I.G.4, the Discharger shall monitor flows and collect and retain samples for affected discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze daily for TSS using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limitations using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze daily the retained samples for all other constituents with effluent limitations, except oil and grease, mercury, PCBs, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass for all other constituents with effluent limitations, except oil and grease, mercury, PCBs, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

## **B. Standard Observations – Addition to Attachment D**

- 1. Receiving Water Observations.** The following requirements only apply when the MRP requires standard observations of receiving waters. Standard observations shall include the following:
  - a. Floating and Suspended Materials** (e.g., oil, grease, algae, and other microscopic particulate matter) — presence or absence, source, and size of affected area.
  - b. Discoloration and Turbidity** — color, source, and size of affected area.
  - c. Odor** — presence or absence, characterization, source, and distance of travel.
  - d. Beneficial Water Use** — estimated number of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities.

- e. **Hydrographic Condition** — time and height of high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time).
  - f. **Weather Conditions** — wind direction, air temperature, and total precipitation during five days prior to observation.
2. **Wastewater Effluent Observations.** The following requirements only apply when the MRP requires standard observations of wastewater effluent. Standard observations shall include the following:
- a. **Floating and Suspended Material of Wastewater Origin** (e.g., oil, grease, algae, and other microscopic particulate matter) — presence or absence.
  - b. **Odor** — presence or absence, characterization, source, distance of travel, and wind direction.
3. **Beach and Shoreline Observations.** The following requirements only apply when the MRP requires standard observations of beaches or shorelines. 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 of number of people participating in recreational water contact, non-water contact, and fishing activities.
4. **Waste Treatment and/or Disposal Facility Periphery Observations.** The following requirements only apply when the MRP requires standard observations of the periphery of waste treatment or disposal facilities. 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 – Supplement to Attachment D, Provision IV.A

The Discharger shall maintain records in a manner and at a location (e.g., the wastewater treatment plant or the Discharger's offices) such that the records are accessible to Regional Water Board staff. The minimum retention period specified in Attachment D, Provision IV, shall be extended during the course of any unresolved litigation regarding permit-related discharges, or when requested by Regional Water Board or U.S. EPA, Region IX, staff.

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 – Supplement to Attachment D, Provision IV.B



Monitoring records shall include the following:

- 1. Analytical Information.** Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.
- 2. Disinfection Process.** For the disinfection process, records shall include the following:
  - a.** For bacteriological analyses:
    - i.** Wastewater flow rate at the time of sample collection; and
    - ii.** Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in the MRP).
  - b.** For the chlorination process (when chlorine is used for disinfection), at least daily average values for the following:
    - i.** Chlorine residual of treated wastewater as it enters the chlorine contact basin (mg/L);
    - ii.** Chlorine dosage (kg/day); and
    - iii.** Dechlorination chemical dosage (kg/day).
- 3. Wastewater Treatment Process Solids.** For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:
  - a.** 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
  - b.** Final disposition of such solids (e.g., landfill, other subsequent treatment unit).
- 4. Treatment Process Bypasses.** For all treatment process bypasses, including wet weather blending, records shall include the following:
  - a.** Chronological log of treatment process bypasses;
  - b.** Identification of treatment processes bypassed;
  - c.** Beginning and ending dates and times of bypasses;
  - d.** Bypass durations;
  - e.** Estimated bypass volumes; and
  - f.** Description of, or reference to other reports describing, the bypasses, their cause, the corrective actions taken (except for wet weather blending explicitly approved within the permit and in compliance with any related permit conditions), and any additional monitoring conducted.

5. **Treatment Plant Overflows.** The Discharger shall retain a chronological log of overflows at the treatment plant, including the headworks and all units and appurtenances downstream, and records supporting the information provided in accordance with Provision V.E.2, below.

**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 – Supplement to Attachment D, Provision V.C**

1. **Self-Monitoring Reports.** For each reporting period established in the MRP, the Discharger shall submit a self-monitoring report to the Regional Water Board in accordance with the requirements listed in the MRP and below:

- a. **Transmittal Letter.** Each self-monitoring report shall be submitted with a transmittal letter that includes the following:

- i. Identification of all violations of effluent limitations or other waste discharge requirements found during the reporting period;
    - ii. Details regarding the violations, such as parameters, magnitude, test results, frequency, and dates;
    - iii. Causes of the violations;
    - iv. Corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedules for implementation (the Discharger may refer to previously submitted reports that address the corrective actions);
    - v. Explanation for any data invalidation. Data should not be submitted in a self-monitoring report if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate a measurement after submitting it in a self-monitoring report, the Discharger 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. The formal 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), and a discussion of the corrective actions taken or planned (with a time schedule for completion) to prevent recurrence of the sampling or measurement problem;
    - vi. Description of blending, if any. If the Discharger blends, it shall describe the duration of blending events and certify whether the blending complied with all conditions for blending;

- vii.** Description of other bypasses, if any. If the Discharger bypasses any treatment units (other than blending), it shall describe the duration of the bypasses and effluent quality during those times; and
  - viii.** Signature. The transmittal letter shall be signed in accordance with Attachment D, Provision V.B.
  
- b. Compliance Evaluation Summary.** Each self-monitoring report shall include a compliance evaluation summary that addresses each parameter for which the permit specifies effluent limitations, the number of samples taken during the monitoring period, and the number of samples that exceed the effluent limitations.
  
- c. More Frequent Monitoring.** If the Discharger monitors any pollutant more frequently than required by the MRP, the Discharger shall include the results of such monitoring in the calculation and reporting of the data submitted in the self-monitoring report.
  
- d. Analysis Results**
  - i. Tabulation.** Each self-monitoring report shall include tabulations of all required analyses and observations, including parameters, dates, times, sample stations, types of samples, test results, method detection limits, method minimum levels, and method reporting levels (if applicable), signed by the laboratory director or other responsible official.
  
  - ii. Multiple Samples.** Unless the MRP specifies otherwise, when determining compliance with effluent limitations (other than instantaneous effluent limitations) and more than one sample result is available, the Discharger shall compute the arithmetic mean. If the data set contains one or more results that are “Detected, but Not Quantified (DNQ) or “Not Detected” (ND), the Discharger shall instead compute the median in accordance with the following procedure:
    - (a)** 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.
  
    - (b)** The median of the data set shall be determined. If the data set has an odd number of data points, the median is the middle value. If the data set has an even number of data points, the median is the average of the two values around the middle, unless one or both of these values is ND or DNQ, in which case the median shall be the lower of the two results (where DNQ is lower than a quantified value and ND is lower than DNQ).
  
  - iii. Duplicate Samples.** The Discharger shall report the average of duplicate sample analyses when reporting for a single sample result (or the median if one or more of the duplicates is DNQ or ND [see Provision V.C.1.c.ii, above]). For bacteria indicators, the Discharger shall report the geometric mean of the duplicate analyses.

- iv. **Dioxin-TEQ.** The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the 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 (MLs) to zero. The Discharger shall calculate and report dioxin-TEQ using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \Sigma (C_x \times \text{TEF}_x \times \text{BEF}_x)$$

where:  $C_x$  = measured or estimated concentration of congener  $x$   
 $\text{TEF}_x$  = toxicity equivalency factor for congener  $x$   
 $\text{BEF}_x$  = 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)	2005 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	0.0003	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.03	0.2
2,3,4,7,8-PeCDF	50	0.3	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	0.0003	0.02

- e. **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 may require additional time to complete analytical processes and report results. In these cases, the Discharger shall describe the circumstances in the self-monitoring report and include the data for these parameters and relevant discussions of any violations in the next self-monitoring report due after the results are available.

- f. Annual Self-Monitoring Reports.** By the date specified in the MRP, the Discharger shall submit an annual self-monitoring report covering the previous calendar year. The report shall contain the following:
- i.** Comprehensive discussion of treatment plant performance, including documentation of any blending or other bypass events, 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 the performance and reliability of wastewater collection, treatment, or disposal practices;
  - ii.** List of approved analyses, including the following:
    - (a)** List of analyses for which the Discharger is certified;
    - (b)** List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory need not be submitted but shall be retained onsite); and
    - (c)** List of “waived” analyses, as approved;
  - iii.** Plan view drawing or map showing the Discharger’s facility, flow routing, and sampling and observation station locations; and
  - iv.** Results of facility report reviews. The Discharger shall regularly review, revise, and update, as necessary, the Operation and Maintenance Manual, Contingency Plan, Spill Prevention Plan, and Wastewater Facilities Status Report so these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall describe or summarize its review and evaluation procedures, recommended or planned actions, and estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure that they remain up-to-date.

**D. Compliance Schedules – Not supplemented**

**E. Twenty-Four Hour Reporting – Supplement to Attachment D, Provision V.E**

**1. Oil or Other Hazardous Material Spills**

- a.** Within 24 hours of becoming aware of a spill of oil or other hazardous material not contained onsite and completely cleaned up, the Discharger shall report as follows:
  - i.** If the spill exceeds reportable quantities for hazardous materials listed in 40 C.F.R. part 302. The Discharger shall call the California Office of Emergency Services (800-852-7550).
  - ii.** If the spill does not exceed reportable quantities for hazardous materials listed in 40 C.F.R., part 302, the Discharger shall call the Regional Water Board (510-622-2369).

- b.** The Discharger shall submit a written report to the Regional Water Board within five working days following either of the above telephone notifications unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:
  - i.** Date and time of spill, and duration if known;
  - ii.** Location of spill (street address or description of location);
  - iii.** Nature of material spilled;
  - iv.** Quantity of material spilled;
  - v.** Receiving water body affected, if any;
  - vi.** Cause of spill;
  - vii.** Estimated size of affected area;
  - viii.** Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);
  - ix.** Corrective actions taken to contain, minimize, or clean up the spill;
  - x.** Future corrective actions planned to prevent recurrence, and implementation schedule; and
  - xi.** Persons or agencies notified.

## **2. Unauthorized Municipal Wastewater Treatment Plant Discharges<sup>1</sup>**

- a. Two-Hour Notification.** For any unauthorized discharge that enters a drainage channel or surface water, the Discharger shall, as soon as possible, but not later than two hours after becoming aware of the discharge, notify the California Office of Emergency Services (800-852-7550) and the local health officer or director of environmental health with jurisdiction over the affected water body. Notification shall include the following:
  - i.** Incident description and cause;
  - ii.** Location of threatened or involved waterways or storm drains;
  - iii.** Date and time that the unauthorized discharge started;
  - iv.** Estimated quantity and duration of the unauthorized discharge (to the extent known), and estimated amount recovered;

---

<sup>1</sup> 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.

- v. Level of treatment prior to discharge (e.g., raw wastewater, primary-treated wastewater, or undisinfected secondary-treated wastewater); and
  - vi. Identity of person reporting the unauthorized discharge.
- b. Five-Day Written Report.** Within five business days following the two-hour notification, the Discharger shall submit a written report that includes, in addition to the information listed in Provision V.E.2.a, above, the following:
- i. Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;
  - ii. Efforts implemented to minimize public exposure to the unauthorized discharge;
  - iii. Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of receiving water) and extent of sampling if conducted;
  - iv. Corrective measures taken to minimize the impact of the unauthorized discharge;
  - v. Measures to be taken to minimize the potential for a similar unauthorized discharge in the future;
  - vi. Summary of Spill Prevention Plan or Operation and Maintenance Manual modifications to be made, if necessary, to minimize the potential for future unauthorized discharges; and
  - vii. Quantity and duration of the unauthorized discharge, and the amount recovered.

**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** – Addition to Attachment D

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

**A. Arithmetic Calculations –**

- 1. Geometric Mean.** 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:

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

or

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

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

- 2. Mass Emission Rate.** The rate of discharge expressed in mass. The 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<sub>i</sub>” and “C<sub>i</sub>” 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<sub>i</sub>” is the concentration measured in the composite sample and “Q<sub>i</sub>” 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:

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

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<sub>t</sub>” is the total flow rate of the combined waste streams.

- 3. Removal Efficiency.** 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):

$$\text{Removal Efficiency (\%)} = 100 \times [1 - (\text{Effluent Concentration} / \text{Influent Concentration})]$$

- B. Blending** – the practice of bypassing biological treatment units and recombining the bypass wastewater with biologically-treated wastewater.
- C. Composite Sample** – 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 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 protocol.
- D. Duplicate Sample** – a second sample taken from the same source and at the same time as an initial sample (such samples are typically analyzed identically to measure analytical variability).
- E. Grab Sample** – an individual sample collected during a short period not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the sample is collected.
- F. Overflow** – the intentional or unintentional spilling or forcing out of untreated or partially-treated waste from a transport system (e.g., through manholes, at pump stations, or at collection points) upstream of the treatment plant headworks or from any part of a treatment plant.
- G. Priority Pollutants** – 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.
- H. Untreated waste** – raw wastewater.

**Table B**  
List of Monitoring Parameters and Analytical Methods

CTR No.	Pollutant/Parameter	Analytical Method <sup>2</sup>	Minimum Levels <sup>3</sup> (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) <sup>4</sup>	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) <sup>5</sup>												
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) <sup>6</sup>	0100.2 7												
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										
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										

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> 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 µg/l).

<sup>5</sup> 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 µg/l).

<sup>6</sup> MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.

<sup>7</sup> 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 Method2	Minimum Levels3 (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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 Dichloromethane	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 Benzo(b)fluoranthene	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									
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										

CTR No.	Pollutant/Parameter	Analytical Method <sup>2</sup>	Minimum Levels <sup>3</sup> (µg/l)												
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP	
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) <sup>8</sup>	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												
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												

<sup>8</sup> 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.

**ATTACHMENT S**

**STORMWATER PROVISIONS, MONITORING, AND REPORTING  
REQUIREMENTS**

November 2017

## Contents

<b>I. STANDARD PROVISIONS – PERMIT COMPLIANCE</b> .....	<b>S-1</b>
A. Stormwater Pollution Prevention Plan (SWPPP) .....	S-2
B. Site Map .....	S-2
C. List of Industrial Materials .....	S-2
D. Potential Pollutant Sources .....	S-2
E. Assessment of Potential Pollutant Sources .....	S-3
F. Minimum Best Management Practices (BMPs) .....	S-4
G. Action Levels and Advanced BMPs .....	S-6
H. BMP Descriptions .....	S-6
I. Annual Comprehensive Facility Compliance Evaluation .....	S-7
<b>II. STANDARD PROVISIONS – MONITORING</b> .....	<b>S-7</b>
A. Visual Observations .....	S-7
1. Monthly Visual Observations .....	S-7
2. Sampling Event Visual Observations .....	S-7
3. Visual Observation Records .....	S-8
4. SWPPP Revisions .....	S-8
B. Sampling and Analysis .....	S-8
<b>III. STANDARD PROVISIONS – REPORTING</b> .....	<b>S-8</b>
A. Annual Stormwater Report .....	S-9
<b>IV. DEFINITIONS</b> .....	<b>S-9</b>

## STORMWATER PROVISIONS

### APPLICABILITY

These stormwater provisions only apply to facilities that do not direct all stormwater flows from process areas to a wastewater treatment plant's headworks or do not enroll in NPDES Permit No. CAS000001 (General Permit for Stormwater Discharges Associated with Industrial Activities).

### I. STANDARD PROVISIONS - PERMIT COMPLIANCE

**A. Stormwater Pollution Prevention Plan (SWPPP).** The Discharger shall prepare a SWPPP that includes the following elements:

1. Facility name and contact information;
2. Site map;
3. List of industrial materials;
4. Description of potential pollution sources;
5. Assessment of potential pollutant sources;
6. Minimum Best Management Practices (BMPs);
7. Advanced BMPs, if applicable;
8. Monitoring implementation plan;
9. Annual comprehensive facility compliance evaluation; and
10. Date SWPPP initially prepared and dates of each SWPPP amendment.

The SWPPP shall be designed in accordance with good engineering practices to achieve the following objectives:

- Identify and evaluate all pollutant sources that may affect stormwater discharge quality;
- Identify, assign, and implement control measures and management practices to reduce or prevent pollutants in stormwater discharges; and
- Identify and describe conditions or circumstances that may require revisions to the SWPPP.

The SWPPP shall be retained onsite, revised whenever necessary, and made available upon request of any Regional Water Board representative. The SWPPP may be combined with the Spill Prevention Plan (see Attachment G Provision I.C.2).

- B. Site Map.** The Discharger shall prepare one or more site maps that include notes, legends, a north arrow, and other data as appropriate to ensure the map is clear, legible and understandable, including the following:
1. The facility boundary, stormwater drainage areas within the facility boundary, and portions of any drainage area impacted by discharges from surrounding areas (the maps shall include the flow direction of each drainage area, on-facility surface water bodies, areas of soil erosion, and locations of nearby water bodies [e.g., rivers, lakes, wetlands] or municipal storm drain inlets that may receive the facility's industrial stormwater discharges and authorized non-stormwater discharges);
  2. Locations of stormwater collection and conveyance systems, associated discharge locations, and direction of flow (the maps shall include sample locations if different than the discharge locations);
  3. Locations and descriptions of structural control measures (e.g., catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers) that affect industrial stormwater discharges, authorized non-stormwater discharges, and run-on;
  4. Identification of all impervious areas, including paved areas, buildings, covered storage areas, or other roofed structures;
  5. Locations where materials are directly exposed to precipitation and the locations where identified significant spills or leaks have occurred; and
  6. Areas of industrial activity (the maps shall identify all industrial storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage and maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and material reuse areas, and other areas of industrial activity that may have potential pollutant sources).
- C. List of Industrial Materials.** The SWPPP shall contain a list of industrial materials handled at the facility and the locations where each material is stored, received, shipped, and handled, as well as the typical quantities and handling frequency.
- D. Potential Pollutant Sources.** The Discharger shall describe and assess potential stormwater pollutant sources, including the following:
1. **Industrial Processes.** Industrial processes may include manufacturing, cleaning, maintenance, recycling, and disposal. The SWPPP shall describe the type, characteristics, and approximate quantity of industrial materials used and areas protected by containment structures and the corresponding containment capacity.
  2. **Material Handling and Storage Areas.** The SWPPP shall describe the type, characteristics, and quantity of industrial materials handled or stored; shipping, receiving, and loading procedures; spill and leak prevention and response procedures; and areas protected by containment structures and the corresponding containment capacity.



- 3. Dust and Particulate Generating Activities.** The SWPPP shall describe the discharge locations, source type, and characteristics of the dust or particulate pollutant.
  - 4. Significant Spills and Leaks.** The Discharger shall evaluate the facility for areas where spills and leaks can occur. The SWPPP shall list any industrial materials spilled or leaked in significant quantities and discharged from the facility's stormwater conveyance system within the previous five years, including but not limited to any chemicals identified in 40 C.F.R. section 302 as reported on U.S. EPA Form R and any oil and hazardous substances discharged in excess of reportable quantities (40 C.F.R. §§ 110, 117, and 302). The SWPPP shall also list any industrial materials spilled or leaked in significant quantities that had the potential to be discharged from the facility's stormwater conveyance system within the previous five years. For each listed industrial material spill and leak, the SWPPP shall include the location, characteristics, and approximate quantity of the material spilled or leaked; the approximate quantity of the material discharged; the cleanup or remedial actions taken or planned; the approximate quantity of remaining material that could be discharged; and the preventive measures taken to ensure that spills or leaks do not reoccur.
  - 5. Non-Stormwater Discharges.** The SWPPP shall describe all non-stormwater discharges, including the source, quantity, frequency, characteristics, and associated drainage area, and indicate whether these discharges are authorized or unauthorized.
  - 6. Erodible Surfaces.** The SWPPP shall describe any facility locations where soil erosion may be caused by industrial activity, contact with stormwater, authorized and unauthorized non-stormwater discharges, or run-on from areas surrounding the facility.
- E. Assessment of Potential Pollutant Sources.** The SWPPP shall include a narrative assessment of all areas of industrial activity with potential industrial pollutant sources, including, at a minimum, the following:
1. Facility areas with likely sources of pollutants;
  2. Pollutants likely to be present in industrial stormwater discharges;
  3. Approximate quantity, physical characteristics (e.g., liquid, powder, solid), and locations of each industrial material handled, produced, stored, recycled, or disposed;
  4. Degree to which the pollutants associated with such materials may be exposed to, and mobilized by, contact with stormwater;
  5. Direct and indirect pathways by which pollutants may be exposed to stormwater;
  6. Sampling, visual observation, and inspection records;
  7. Effectiveness of existing BMPs to reduce or prevent pollutants in industrial stormwater discharges; and
  8. Estimated effectiveness of implementing, to the extent feasible, minimum BMPs to reduce or prevent pollutants in industrial stormwater discharges.

Based upon the assessment, the SWPPP shall identify facility areas where the minimum BMPs described in Provision I.F, below, will not adequately reduce or prevent pollutants in stormwater discharges and any necessary advanced BMPs, as described in Provision I.G, below, for those areas.

**F. Minimum Best Management Practices (BMPs).** The Discharger shall, to the extent feasible, implement and maintain the following BMPs:

**1. Good Housekeeping.** The Discharger shall do the following:

- a. Observe all outdoor areas associated with industrial activity, including stormwater discharge locations, drainage areas, conveyance systems, waste handling and disposal areas, and perimeter areas affected by off-facility materials or stormwater run-on to determine housekeeping needs. Any identified debris, waste, spills, tracked materials, or leaked materials shall be cleaned and disposed of properly;
- b. Minimize or prevent material tracking;
- c. Minimize dust generated from industrial materials or activities;
- d. Ensure that all facility areas impacted by rinse or wash waters are cleaned as soon as possible;
- e. Cover all stored industrial materials that can be readily mobilized by contact with stormwater;
- f. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powders, shredded paper) that can be transported or dispersed by the wind or contact with stormwater;
- g. Prevent disposal of any rinse or wash waters or industrial materials into the stormwater conveyance system;
- h. Minimize stormwater discharges from non-industrial areas (e.g., stormwater flows from employee parking areas) that contact industrial areas of the facility; and,
- i. Minimize authorized non-stormwater discharges from non-industrial areas (e.g., potable water, fire hydrant testing) that contact areas of the sanitary or industrial facility.

**2. Preventative Maintenance.** The Discharger shall (1) identify all equipment and systems used outdoors that may spill or leak pollutants, (2) observe the identified equipment and systems to detect leaks or identify conditions that may result in the development of leaks, (3) establish an appropriate schedule for maintenance of identified equipment and systems, and (4) establish procedures for prompt maintenance and repair of equipment and maintenance of systems when conditions exist that may result in the development of spills or leaks.

**3. Spill and Leak Prevention and Response.** The Discharger shall (1) establish procedures and controls to minimize spills and leaks; (2) develop and implement spill and leak response procedures to prevent industrial materials from discharging through the stormwater conveyance system (spilled or leaked industrial materials shall be cleaned promptly and

disposed of properly); (3) identify and describe all necessary and appropriate spill and leak response equipment, locations of spill and leak response equipment, and spill or leak response equipment maintenance procedures; and (4) identify and train appropriate spill and leak response personnel.

- 4. Material Handling and Waste Management.** The Discharger shall do the following:
    - a. Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with stormwater during a storm;
    - b. Contain all stored non-solid industrial materials or wastes (e.g., particulates, powers, shredded paper) that can be transported or dispersed by the wind or contact with stormwater;
    - c. Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use;
    - d. Divert run-on and stormwater generated from within the facility away from all stockpiled materials;
    - e. Clean all spills of industrial materials or wastes that occur during handling in accordance with spill response procedures; and,
    - f. Observe and clean, as appropriate, any outdoor material or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes.
  - 5. Erosion and Sediment Control.** The Discharger shall (1) implement effective wind erosion controls; (2) provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to forecasted storms; (3) maintain effective perimeter controls and stabilize site entrances and exits to sufficiently control discharges of erodible materials; and (4) divert run-on and stormwater generated from within the facility away from erodible materials.
  - 6. Employee Training.** The Discharger shall ensure that all personnel implementing the SWPPP are properly trained with respect to BMP implementation, BMP effectiveness evaluations, visual observations, and monitoring activities. The Discharger shall identify which personnel need to be trained, their responsibilities, and the type of training they are to receive and maintain documentation of completed training and the personnel that received the training with the SWPPP.
  - 7. Quality Assurance and Record Keeping.** The Discharger shall (1) develop and implement management procedures to ensure that appropriate personnel implement all SWPPP elements; (2) develop methods of tracking and recording BMP implementation; and (3) maintain BMP implementation records, training records, and records related to any spills and clean-up related response activities for a minimum of five years.
- G. Action Levels and Advanced BMPs.** If the Discharger samples total suspended solids (TSS), oil and grease, or pH in excess of an action level in Table A, the Discharger shall review the SWPPP to identify appropriate modifications to existing BMPs or additional BMPs as necessary

to reduce pollutant discharge concentrations to levels below the action level. The Discharger shall revise the SWPPP accordingly before the next storm, if possible, or as soon as practical, and in no event later than three months following the exceedance.

**Table A**  
 Stormwater Action Levels

Parameter	Unit	Instantaneous Action Level	Annual Action Level
Total Suspended Solids	mg/L	400	100
Oil and Grease	mg/L	25	15
pH	standard units	6.0-9.0[1]	---

Footnote:  
 [1] Values below or above this range require action.

If, upon subsequent monitoring, the pollutants measured in Table A continue to exceed their respective action levels, the Discharger shall further evaluate its BMPs and update its SWPPP accordingly to include advanced BMPs in addition to the minimum BMPs described in Provision I.F, above. The Discharger shall, to the extent feasible, implement and maintain any advanced BMPs identified pursuant to Provision I.E.8, above, as necessary to reduce or prevent discharges of pollutants in stormwater discharges in a manner that reflects best industry practice considering technological availability and economic practicability and achievability. Advanced BMPs may include one or more of the following:

1. Exposure Minimization BMPs. These include storm resistant shelters (either permanent or temporary) that prevent the contact of stormwater with identified industrial materials.
2. Stormwater Containment and Discharge Reduction BMPs. These include BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of stormwater runoff.
3. Treatment Control BMPs. These include mechanical, chemical, biologic, or any other treatment technology that will meet the treatment design standard.

**H. BMP Descriptions.** The SWPPP shall identify each BMP being implemented at the facility, including the following:

1. The pollutants the BMP is designed to reduce or prevent;
2. The frequency, times of day, or conditions when the BMP is scheduled for implementation;
3. The locations within each area of industrial activity or industrial pollutant source where the BMP shall be implemented;
4. The individual responsible for implementing the BMP;
5. The procedures, including maintenance procedures, and instructions to implement the BMP effectively; and
6. The equipment and tools necessary to implement the BMP effectively.

**I. Annual Comprehensive Facility Compliance Evaluation.** The Discharger shall conduct one annual facility evaluation for each reporting year (July 1 to June 30). If the Discharger conducts an annual evaluation fewer than 8 months, or more than 16 months, after it conducts the previous annual evaluation, it shall document the justification for doing so. The Discharger shall revise the SWPPP, as appropriate, and implement the revisions within 90 days of the annual evaluation. At a minimum, the annual evaluations shall consist of the following:

1. A review of all sampling, visual observation, and inspection records conducted during the previous reporting year;
2. An inspection of all areas of industrial activity and associated potential pollutant sources for evidence of, or the potential for, pollutants entering the stormwater conveyance system;
3. An inspection of all drainage areas previously identified as having no exposure to industrial activities and materials;
4. An inspection of equipment needed to implement the BMPs; and
5. An assessment of any other factors needed to comply with the requirements of the Annual Stormwater Report (see Provision III.A, below).

## **II. STANDARD PROVISIONS – MONITORING**

### **A. Visual Observations**

#### **1. Monthly Visual Observations**

- a. At least once per month, the Discharger shall visually observe each drainage area for the following:
  - i. The presence or indication of prior, current, or potential unauthorized non-stormwater discharges and their sources;
  - ii. Authorized non-stormwater discharges, sources, and associated BMPs; and
  - iii. Outdoor industrial equipment and storage areas, outdoor industrial activities areas, BMPs, and all other potential sources of industrial pollutants.
- b. The monthly visual observations shall be conducted during daylight hours of scheduled facility operating hours and on days without precipitation.
- c. The Discharger shall provide an explanation in the Annual Stormwater Report for uncompleted monthly visual observations (see Provision III.A, below).

**2. Sampling Event Visual Observations.** Sampling event visual observations shall be conducted at the same time sampling occurs at a discharge location. At each discharge location where a sample is obtained, the Discharger shall observe the discharge of stormwater associated with industrial activity.

- a. The Discharger shall ensure that visual observations of stormwater discharged from containment sources (e.g., secondary containment or storage ponds) are conducted at the time that the discharge is sampled.
  - b. If the Discharger employs volume-based or flow-based treatment BMPs, it shall sample any bypass that occurs while the visual observations and sampling of stormwater discharges are conducted.
  - c. The Discharger shall visually observe and record the presence or absence of floating and suspended materials, oil and grease, discolorations, turbidity, odors, trash/debris, and sources of any discharged pollutants.
  - d. If a discharge location is not visually observed during the sampling event, the Discharger shall record which discharge locations were not observed during sampling or that there was no discharge from the discharge location.
  - e. The Discharger shall provide an explanation in the Annual Stormwater Report for uncompleted sampling event visual observations (see Provision III.A, below).
3. **Visual Observation Records.** The Discharger shall maintain records of all visual observations. Records shall include the date, approximate time, locations observed, presence and probable source of any observed pollutants, name of persons who conducted the observations, and any response actions and/or additional SWPPP revisions necessary in response to the visual observations.
4. **SWPPP Revisions.** The Discharger shall revise its BMPs as necessary when the visual observations indicate pollutant sources have not been adequately addressed.

## **B. Sampling and Analysis**

1. The Discharger shall collect and analyze stormwater samples as specified in the MRP.
2. Samples shall be (i) representative of stormwater associated with industrial activities and any commingled authorized non-stormwater dischargers; or (ii) associated with the discharge of contained stormwater.
3. On a facility-specific basis, the Discharger shall also analyze additional parameters that serve as indicators of the presence of all industrial pollutants identified in the pollutant source assessment. These additional parameters may be modified (added or removed) in accordance with any updated SWPPP pollutant source assessment.

## **III. STANDARD PROVISIONS – REPORTING**

- A. Annual Stormwater Report.** The results of the Discharger's Annual Comprehensive Facility Compliance Evaluation shall be reported in the Annual Stormwater Report to the Regional Water Board no later than July 30. The Discharger shall include in the Annual Stormwater Report the following:

1. A compliance checklist that indicates whether the Discharger has complied with or addressed all applicable requirements of the SWPPP;
2. An explanation for any non-compliance requirements within the reporting year, as indicated in the compliance checklist;
3. An identification, including page numbers and sections, of all revisions made to the SWPPP within the reporting year; and
4. The date(s) of the annual evaluation.

#### IV. DEFINITIONS

**A. Authorized Non-Stormwater Discharges** — non-stormwater discharges are authorized if they meet the following conditions:

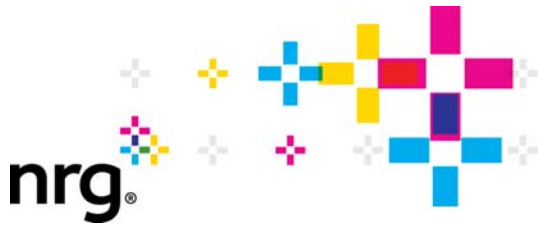
1. Fire-hydrant and fire prevention or response system flushing;
2. Potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems;
3. Drinking fountain water and atmospheric condensate, including refrigeration, air conditioning, and compressor condensate;
4. Irrigation drainage and landscape watering, provided that all pesticides, herbicides, and fertilizers have been applied in accordance with manufacturer's labels;
5. Uncontaminated natural springs, groundwater, foundation drainage, footing drainage;
6. Seawater infiltration where the seawater is discharged back into the source; or,
7. Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from cooling towers (e.g., "piped" cooling tower blowdown or drains).

**B. Stormwater** — stormwater runoff, snow melt runoff, and surface runoff and drainage, excluding infiltration and runoff from agricultural land.

# Appendix B

## Comments





**NRG Delta, LLC**  
 Pittsburg Generating Station  
 696 West 10<sup>th</sup> Street (shipping)  
 PO Box 192 (mailing)  
 Pittsburg, CA 94565

April 12, 2018

Mr. Bill Johnson  
 Chief, NPDES Wastewater Division  
 San Francisco Bay Regional Water Quality Control Board  
 1515 Clay Street, Suite 1400  
 Oakland, California 94612  
 Attn: Mr. John Madigan

**Subject: Comments on Tentative Order for NRG Delta, LLC,  
 Pittsburg Generating Station, Contra Costa County,  
 NPDES Permit No. CA0004880**

Dear Mr. Madigan:

Thank you for the opportunity to comment on San Francisco Regional Water Quality Control Board's (Regional Board) Tentative Order (TO) for Pittsburg Generating Station's (PGS) NPDES Permit No. CA0004880 sent on March 13, 2018.

First, NRG Delta, LLC notes the following editorial comments. We would like to correct the name from Pittsburg Power Plant to Pittsburg Generating Station in the TO. The facility is initially referenced as Pittsburg Power Plant on Table 1. Discharger Information on page 1 of the TO. Also on page 1 of the TO, please correct the spelling of "chlorine" building in the effluent description for Discharge Point 001 on Table 2. Discharge Locations.

Second, in IV. Effluent Monitoring Requirements of Attachment E – Monitoring and Reporting Program (MRP), NRG Delta, LLC respectfully requests the following modifications to the monitoring of location EFF-001G in the TO. ~~Strike through~~ is used for requested deletions and underline is used for requested additions.

**Table E-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency
<b>Monitoring Location EFF-001G</b>			
Flow <sup>[1]</sup>	MGD	Continuous	Continuous/D
pH	standard units	Grab	1/ <del>Month</del> <u>Quarter</u>
Total Suspended Solids (TSS)	mg/L	Grab	1/ <del>Month</del> <u>Quarter</u>
Oil and Grease	mg/L	Grab	1/Quarter
Copper, Total Recoverable	µg/L	Grab	1/ <del>Month</del> <u>Quarter</u>
PCBs, Total (as Aroclors)	µg/L	Grab	1/Year
Acute Toxicity	% survival	<del>€-24 Grab</del>	1/ <del>Month</del> <u>Quarter</u>
Chronic Toxicity <sup>[2]</sup>	TUc	<del>€-24 Grab</del>	Once
<b>Monitoring Locations EFF-001H and EFF-003 through EFF-015<sup>[3, 4]</sup></b>			
Flow	MGD	Continuous	1/Month <sup>[5]</sup>
pH	standard units	Grab	1/Quarter
TSS	mg/L	Grab	1/Quarter

NRG Delta, LLC requests to adjust the monitoring frequency of the oil-water separator (OWS) effluent to a consistent regularity of once a quarter for all parameters. This corresponds to the quarterly monitoring frequency of the oil and grease parameter stated in the TO. The OWS is considered by industry standards and by the California Stormwater Quality Association as an effective treatment control Best Management Practice for storm water. Rainwater is the primary source of influent to the OWS. With the retirement of the facility and negligible potential of rainwater to be exposed to remaining industrial materials onsite along with the treatment capability of the OWS, NRG Delta, LLC considers once a quarter commensurate with the requirements and potential impacts of the OWS discharge. The current dosage rate of treatment chemicals used to enhance mercury treatment has shown not to explicitly cause or contribute to an exceedance of the water quality objective for acute toxicity in Suisun Bay. The Regional Board is authorized to establish monitoring and these requested monitoring modifications still allow the Order to comply with anti-backsliding provisions and antidegradation provisions; furthermore, NRG Delta, LLC is not asking for a modification to the effluent limitations.

In addition, due to the limited duration of OWS discharges since the deactivation of the facility, NRG Delta, LLC requests the sample type of grab rather than 24-hour composite for toxicity tests. It is unlikely the duration of the discharge will occur for 24 hours, with the exception of extreme and unexpected conditions such as significant rainfall events in which the facility personnel cannot predict and prepare a composite sampler to collect samples for the possible 24-hour duration of the discharge.

Third, the influent waste streams to OWS system enter the system in different locations. Rainwater collected in basement and building sumps combine into a main header and enters a submerged outlet at the bottom of the API separator. Rainwater collected from yard drains and the clean-closed ponds is pumped directly into the Oily Water Collection Pond. NRG Delta, LLC requests a modification to the influent monitoring location description to specify a point prior to chemical treatment of mercury, which occurs when the wastewater from the Oily Water Collection Pond is pumped and treated prior to the lamella. NRG Delta, LLC would be burdened to change the infrastructure and add a sampling port to the underground main header piping to the API separator in an effort to collect this waste stream prior to any phase of treatment. NRG Delta, LLC prefers to sample at the Oily Water Collection Pond, the influent to the lamella, as the influent monitoring location prior to the chemical treatment phase to characterize influent mercury concentrations. Additionally, and consistent with the above requested modifications to effluent monitoring, we respectfully request modification to the frequency of influent mercury monitoring to quarterly from monthly for monitoring location INF-001G. ~~Strike through~~ and underline is used for requested modifications to Tables E-1 and E-2 below.

**Table E-1. Monitoring Locations**

Sampling Location Type	Monitoring Location Name	Monitoring Location Description <sup>[1]</sup>
Influent	INF-001G	A point prior to the treatment system at which all waste tributary to the treatment system is present and preceding any phase of <u>chemical</u> treatment.
Effluent	EFF-001G	A point after all treatment is complete (i.e., effluent leaving the treatment system) and prior to both mixing with stormwater and discharge.

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Mercury	µg/L	Grab	1/ <del>Month</del> Quarter

Mr. Bill Johnson  
Chief, NPDES Wastewater Division  
April 12, 2018  
Page 3 of 3

We greatly appreciate the effort and communication of the Regional Board with the renewal of this permit. If you have any questions, please contact Aman (Prakash) Singh at [aman.singh@genon.com](mailto:aman.singh@genon.com) or 925-427-3451, or Kathy Crist at [kathy.crist@nrg.com](mailto:kathy.crist@nrg.com) or 925-324-8578.

Very respectfully,



**George L. Piantka, PE**  
Senior Director, Regulatory Environmental Services  
NRG Energy, Inc.

cc: Prakash Singh, NRG Delta, LLC  
Kathy Crist, ERM  
Keith Schmidt, GenOn  
Stephen Frank, GenOn



April 12, 2018

Mr. John H. Madigan, P.E.  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Re: San Francisco Bay Regional Water Quality Control Board (RWQCB)  
Pittsburg Power Plant - Tentative Order to Reissue NPDES Permit  
NPDES Permit No. CA0004880

Subject: City of Pittsburg Comments to the Tentative Order

Dear Mr. Madigan,

The City of Pittsburg ("City") has had the opportunity to review the referenced Tentative Order for the reissue of the Pittsburg Power Plant NPDES Permit (No. CA0004880) and offers the following observations, comments and specific concerns.

Summary:

1. Site Ownership: The NPDES reissue application is submitted under the name of "NRG Delta, LLC". NRG Delta, LLC is in bankruptcy in the Southern District of Texas bankruptcy court.

With the cessation of operations at the Pittsburg Power Plant ("PPP") site, the City seeks assurance that the current owner and any successor owner will maintain the site in accordance with the NPDES.

2. PCB Occurrence: The Tentative Order states that there have been past violations for PCB and mercury exceedances in the stormwater discharge. Although the PPP historical treatment ponds and associated equipment have been removed, and the discharger mitigated for its mercury exceedances, there did not appear to be a determination of source for the PCB's in the ponds.

The Tentative Order further states that oil-containing transformers and circuit breakers remain at the site. Has the Applicant, or any other group or agency, performed sampling and testing to determine whether these facilities are a source of PCB exceedances?

The City operates under NPDES permit No. CAS612008. This permit includes provisions and requirements for the permittee to implement a control plan that includes source and treatment controls and pollution prevention strategies and measures.

The City requests that the RWQCB support its efforts to help meet its own discharge reduction goals and its obligations as "Custodial Trustee" of riverfront waters under SB 551 by requiring the applicant to identify and mitigate their source of PCB's.

3. Asbestos: The City raises the issue regarding asbestos entering the stormwater collection and outflow systems. PPP Units 1-6 boilers and large steam piping are wrapped in asbestos insulation which is contained within sheet metal cladding.

All the boiler units at PPP are “open” structures, and hence exposed to the elements. Given the specter of the facility being effectively abandoned, and with weather and time, the cladding will deteriorate – leading to the exposure and eventual breakdown of the asbestos insulation and its potential for being washed into the stormwater system, and subsequently the Bay.

The City will pursue the potential for wind-driven asbestos with the Bay Area Air Quality Management District.

4. PG&E Switchyard: The Tentative Order indicates the presence of the PG&E transmission switchyard that is not part of the NRG facility covered by this Tentative Order. Yet, runoff from this area is discharged to NPDES Permit Point No. 003. Can RWB clarify as to whether PG&E has a separate waste discharge permit? If not, how is this accounted for in the NPDES Permit?

The City appreciates the opportunity to comment on the subject Tentative Order, and looks forward to assisting and working closely with the RWQCB as such may be appropriate.

Respectfully Submitted,

*Douglas W. Buchanan*

---

Douglas W. Buchanan, PE  
Power Company Manager  
City of Pittsburg

*12 April 2018*

---

Date

Appendix C  
Response to Comments

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

**RESPONSE TO WRITTEN COMMENTS**  
on the Tentative Order for  
NRG Delta, LLC, Pittsburg Generating Station,  
Pittsburg, Contra Costa County

On April 12, 2018, Regional Water Board staff received written comments from NRG Delta, LLC, and the City of Pittsburg regarding a tentative order distributed on March 13, 2018, for public comment.

Regional Water Board staff has summarized the comments, shown below in *italics* (paraphrased for brevity) and followed each comment with a 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.

---

**NRG Delta, LLC (NRG)**

---

*Comment 1: NRG requests that the name of the Pittsburg facility be corrected from the Pittsburg Power Plant to the Pittsburg Generating Station. NRG also provided minor editorial comments.*

**Response:** We agree and revised Table 1 as follows:

**Table 1. Discharger Information**

<b>Discharger</b>	NRG Delta, LLC
<b>Facility Name</b>	Pittsburg <del>Power Plant</del> <u>Generating Station</u>
<b>Facility Address</b>	696 West 10th Street
<b>:</b>	<b>:</b>

We revised section I as follows:

Information describing the Pittsburg ~~Power Plant~~ Generating Station (Facility) is summarized in Table 1 and Fact Sheet (Attachment F) sections I and II.

We revised Fact Sheet Table F-1 as follows:

**Table F-1. Facility Information**

<b>CIWQS Place ID</b>	248542
<b>Discharger</b>	NRG Delta, LLC (NRG)
<b>Facility Name</b>	Pittsburg <del>Power Plant</del> <u>Generating Station</u>
<b>Facility Address</b>	696 West 10th Street, Pittsburg, CA 94565

<b>Facility Contact, Title, Phone</b>	Aman Prakash Singh, Operations Supervisor, (925) 427-3451
<b>Authorized Person to Sign and Submit Reports</b>	Lee Moore, Plant Manager, NRG Delta, LLC, Pittsburg <del>Power Plant</del> <u>Generating Station</u> , 696 West 10th Street, Pittsburg, CA 94565
⋮	⋮

We revised Fact Sheet section I.A as follows:

NRG Delta, LLC (formerly Mirant Delta, LLC) (Discharger) owns the Pittsburg ~~Power Plant~~ Generating Station (Facility), which discharges to Suisun Bay and Willow Creek, which is tributary to Suisun Bay, through 17 discharge points.

We revised the heading of Attachment F-1 as follows:

**Pittsburg Power Plant Generating Station**  
**Violations of Mercury and PCBs Watershed Permit Mercury Limits**  
**January 2010 through August 2017**

Finally, we corrected the facility name in the document headers.

***Comment 2:** NRG requests that we revise Monitoring and Reporting Program (MRP) Table E-3 to reduce the monitoring frequency at Monitoring Location EFF-001G (i.e., for discharges from the treatment system) to once per quarter for pH, total suspended solids (TSS), copper, and acute toxicity. Since the facility stopped generating electricity, influent to the treatment system (also referred to as the Oil-Water Separator [OWS]), is now primarily stormwater; the OWS is considered an effective stormwater Best Management Practice. Also, it is unlikely that stormwater will be exposed to the remaining industrial materials onsite. Furthermore, the treatment chemicals used to enhance mercury removal do not cause acute toxicity at current dosages. NRG is not requesting a modification to the effluent limitations.*

**Response:** We did not revise the tentative order. The monthly monitoring frequencies for pH, TSS, copper, and acute toxicity at EFF-001G apply only during months when discharge occurs (i.e., when it rains) during the much-reduced operating hours of the facility. Given those restrictions, it's not clear that a quarterly monitoring frequency for pH, TSS, copper, and acute toxicity would result in sufficient data to assess compliance. Also, given those restrictions, we do not believe monthly monitoring is burdensome (i.e., the tentative order would not require NRG to monitor outside its operating hours even if the result is less than monthly monitoring). Furthermore, while discharge from the treatment system is now mostly storm-driven, the effectiveness of the treatment system must be assured; TSS monitoring, in particular, is a good measure of treatment system effectiveness because the treatment system is designed to control TSS.

We also note that NRG has experienced some variability with acute toxicity and turbidity that suggest monthly monitoring is appropriate. In March 2018, NRG's acute toxicity bioassay at Monitoring Location EFF-001G resulted in less than 70 percent survival (65 percent) before the test was terminated at approximately 48 hours. The following sample resulted in 100 percent



survival (i.e., no acute toxicity) and the 11-sample median and 90<sup>th</sup> percentile limits were not violated; however, the 65 percent survival result demonstrates reasonable potential to cause or contribute to an exceedance of the acute toxicity water quality objective. The March 28, 2018, 5-day letter report on that bioassay failure noted that the effluent appeared more turbid than usual, while the following samples did not; this observation further supports a need for monthly rather than quarterly monitoring.

*Comment 2a: NRG requests that we revise Table E-3 to change 24-hour composite samples for acute and chronic toxicity to grab samples. Because the facility no longer generates electricity and discharges are driven by wet weather, both the frequency and duration of discharges are much decreased. Therefore, it may not always be possible to obtain a 24-hour composite sample.*

**Response:** We agree. If necessary, a 24-hour static bioassay without renewals could be performed using a grab sample. We revised Table E-3 as follows:

**Table E-3. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency
<b>Monitoring Location EFF-001G</b>			
⋮	⋮	⋮	⋮
PCBs, Total (as Aroclors)	µg/L	Grab	1/Year
Acute Toxicity	% survival	<del>24</del> Grab	1/Month
Chronic Toxicity <sup>[2]</sup>	TUc	<del>24</del> Grab	Once
		⋮	

*Comment 3: NRG requests that we revise Table E-1 to modify the mercury monitoring location to the oily water collection pond, the influent to the lamella filter, before chemical treatment rather than before any phase of treatment. Influent from basement and building sumps enters an underground main header, then flows to a submerged inlet at the bottom of the American Petroleum Institute (API) separator, while influent from the yard drains and clean-closed ponds is pumped directly to the oily water collection pond. Thus, NRG would have to add a sampling port to the underground header to sample that influent before any treatment; furthermore, NRG would have to alter its infrastructure so that all waste tributary to the treatment system would be present before any phase of treatment. These steps would be burdensome. NRG suggests monitoring the effluent from the oily water collection pond before addition of treatment chemicals and flow to the lamella filter.*

*In addition, NRG requests that we revise Table E-2 to reduce the required influent mercury sampling frequency from monthly to quarterly.*

**Response:** We agree. Chemical treatment has been necessary to ensure adequate mercury removal, so it is unlikely that significant mercury is removed prior to that point, and samples collected there would still be reasonably representative of influent mercury. Quarterly monitoring of influent mercury during any quarter the treatment system operates would likely result in 10 to 20 samples over five years, which would be enough to assess influent mercury concentrations. We revised Table E-1 as follows:

**Table E-1. Monitoring Locations**

Sampling Location Type	Monitoring Location Name	Monitoring Location Description <sup>[1]</sup>
Influent	INF-001G	A point prior to the treatment system at which all waste tributary to the treatment system is present and preceding <del>any phase of</del> <u>chemical</u> treatment.
Effluent	EFF-001G	A point after all treatment is complete (i.e., effluent leaving the treatment system) and prior to both mixing with stormwater and discharge.
⋮	⋮	⋮

We revised MRP Table E-2 and its footnotes as follows:

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency
Mercury	µg/L	Grab	1/ <del>Month</del> <u>Quarter</u> <sup>[1]</sup>

⋮

Sampling Frequency:

1/~~Month~~ Quarter = once per month

Footnote:

[1] The Discharger shall collect at least one sample in any calendar ~~month~~ quarter in which the treatment system operates.

We also revised Fact Sheet Table F-12 as follows:

**Table F-12. Monitoring Requirements Summary**

Parameter	Influent INF-001G	Effluent EFF-001G	Effluent EFF-001H and EFF-003 through -015	Receiving Water
⋮	⋮	⋮	⋮	⋮
Remaining Priority Pollutants	---	1/Year	---	Support RMP
Mercury	1/ <del>Month</del> <u>Quarter</u>	1/Month	---	---
Visual Observations	---	---	1/Month including at each sampling event	---

**City of Pittsburg**

**Comment 1:** *The City requests assurance that the current site owner and any successor owner will maintain the site in accordance with the NPDES permit. The City states that NRG Delta, LLC, is currently in bankruptcy court in the Southern District of Texas.*

**Response:** The Code of Federal Regulations, title 40 (40 C.F.R.), section 122.63(d), requires a written agreement with a specific date for transfer of permit responsibility, coverage, and

liability between current and new permittees. Such an agreement must be submitted to the Regional Water Board, which must determine that no other change to the permit is necessary. Absent such an agreement, the permit cannot be transferred, and the responsibility for permit compliance, and liability for enforcement, stays with the party originally permitted.

On June 14, 2017, GenOn Energy, Inc., a subsidiary of NRG Energy, Inc., and 61 affiliated companies, including NRG Delta, LLC, each filed for Chapter 11 bankruptcy protection in the United States Bankruptcy Court for the Southern District of Texas. (The lead case is Case #17-33695; the case pertaining specifically to NRG Delta LLC is Case #17-33721. These and the other 60 cases have been assigned to Judge David R. Jones and are being administered jointly.)<sup>1</sup> Apparently, the intent was to split GenOn Energy and NRG Energy into separate businesses<sup>2</sup>. NRG Delta, LLC, expects to undergo a name change to GenOn Delta, LLC, post-bankruptcy and, as such, would continue to operate the site and retain responsibility for permit compliance. The Regional Water Board will hold the appropriately named party responsible for permit compliance regardless of the results of the bankruptcy proceedings.

***Comment 2:** The City requests that the Regional Water Board require NRG to identify and mitigate its PCB sources. The City states that, according to the tentative order, NRG previously violated PCBs and mercury limits on its stormwater discharges; NRG mitigated its mercury exceedances but did not determine its PCBs source. Further, the tentative order states that oil-containing transformers and circuit breakers remain at the site. The City asks whether sampling has occurred to determine if these are a source of PCBs. The City also notes that it operates under NPDES permit No. CAS612008, which includes requirements to implement source and treatment controls, and pollution prevention measures, and is a “Custodial Trustee” of riverfront waters under SB 551. The City requests the Regional Water Board’s assistance in requiring the applicant to identify and mitigate any PCBs.*

**Response:** We revised Fact Sheet section II.H to clarify that NRG has not violated PCBs limits in NPDES Permit No. CA0038849 (Mercury and PCBs Watershed Permit), only mercury limits, as follows:

During the last ten years, the Discharger did not violate the terms of the previous order; however, the Discharger violated mercury limits in NPDES Permit No. CA0038849 (Mercury and PCBs Watershed Permit). ~~These Mercury and PCBs Watershed Permit violations~~ are relevant to this Order because this Order requires the Discharger to operate a treatment system intended to control mercury discharges. This Order also requires the treatment system to comply with other effluent limits at Monitoring Location EFF-001G, where the ~~Mercury and PCBs Watershed Permit violations~~ occurred. Furthermore, this Order’s ... .

To our knowledge, NRG has not detected PCBs in its discharges. The tentative order would retain the previous order’s PCBs effluent limit of no detectable amount at Discharge Point No. 001 (see Table 4). If that limit is violated, the federal and State standard provisions

<sup>1</sup> <http://dm.epiq11.com/#/case/GenOn/info>

<sup>2</sup> <https://www.reuters.com/article/us-nrg-energy-genon-bankruptcy/nrg-energys-genon-unit-files-for-bankruptcy-idUSKBN1952G7>

(Attachments D and G) require that NRG notify the Board and monitor at the relevant discharge point until it demonstrates compliance. For any violation, State standard provisions (Attachment G) would require NRG to identify the cause and corrective actions to prevent recurrence.

***Comment 3:** The City raises the potential for asbestos to enter the stormwater collection and discharge systems. The City states that the Unit 1 through Unit 6 boilers and steam piping are wrapped in asbestos insulation contained in sheet metal cladding, and that Units 1 through 6 are open structures exposed to the elements. The City states that the asbestos insulation will eventually be exposed, break down, and possibly be discharged to Suisun Bay in stormwater. The City will contact the Bay Area Air Quality Management District to pursue the potential for wind-blown asbestos.*

**Response:** We did not revise the tentative order. Asbestos is a California Toxics Rule pollutant; NRG's Report of Waste Discharge reported that asbestos was not detected at Monitoring Location EFF-001G and detected at 13.3 million fibers per liter (MFL) at Monitoring Location EFF-006. We found no reasonable potential for asbestos because there is no asbestos water quality objective in San Francisco Bay (or Suisun Bay). Also, the drinking water Maximum Contaminant Level of 7 MFL does not apply as a water quality objective because the receiving waters are not potential drinking water sources.

That said, Regional Water Board staff have observed during site inspections that the Unit 1 through 6 structures are, as the City states, open to the elements. The tentative order does not currently affect NRG's responsibility to manage asbestos in accordance with applicable laws under the oversight of the Air District and other appropriate agencies.

***Comment 4:** The City asks whether Pacific Gas and Electric (PG&E) has a separate discharge permit, or, if not, how the tentative order accounts for stormwater from PG&E's switchyard. The City notes that such stormwater is discharged at Discharge Point No. 003, but that the PG&E switchyard is not part of NRG's facility covered by the tentative order.*

**Response:** PG&E does not have a separate discharge permit for stormwater from its switchyard at the Pittsburg Generating Station because PG&E does not discharge stormwater to a surface water. Most stormwater from the switchyard flows to an impoundment on NRG's property that is controlled by a valve. The tentative order allows NRG to discharge the impounded stormwater at Discharge Point No. 003, though NRG typically allows it to evaporate from the impoundment (see Fact Sheet section II.B). The tentative order also allows NRG to discharge stormwater from the northernmost part of the PG&E switchyard at Discharge Point No. 007 (see Fact Sheet Table F-1). As described in section II.B, the Regional Water Board incorporates the Fact Sheet into the tentative order as findings; thus, the tentative order requires NRG to operate according to the Fact Sheet's description of the facility.

NRG maintains a Stormwater Pollution Prevention Plan (SWPPP) for the facility; it submitted a copy dated December 2016 with its Report of Waste Discharge. The SWPPP addresses the PG&E switchyard area and describes the operation of the impoundment discussed above and

other Best Management Practices to prevent pollutant discharge. Attachment G to the tentative order requires NRG to maintain and revise the SWPPP as necessary.