

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

STAFF SUMMARY REPORT (William Burrell)
MEETING DATE: November 8, 2017

ITEM: **5A**

SUBJECT: **Sewer Authority Mid-Coastside, Wastewater Treatment Plant and Intertie Pipeline System, Half Moon Bay, San Mateo County – Reissuance of NPDES Permit**

CHRONOLOGY: August 2012 – Permit reissued

DISCUSSION: This Revised Tentative Order (Appendix A) would reissue the NPDES permit for the Sewer Authority Mid-Coastside's wastewater treatment plant in Half Moon Bay. The Sewer Authority serves about 25,000 people on the San Mateo County coast through three satellite collection systems: the City of Half Moon Bay, the Granada Community Services District, and the Montara Water and Sanitary District. The treatment plant discharges about 1.6 million gallons per day of secondary-treated wastewater through an outfall extending 1,900 feet into the Pacific Ocean.

The Revised Tentative Order includes requirements for a planned Recycled Water Project that would use a combination of ultrafiltration and reverse osmosis to treat up to 0.8 million gallons per day of the plant's treated effluent. The project would result in a more concentrated discharge to the Ocean because the Sewer Authority proposes to mix reverse osmosis concentrate with plant effluent prior to discharge. To ensure protection of water quality, the Revised Tentative Order includes requirements for the Sewer Authority to test and analyze for complete mixing of effluent, acute and chronic toxicity, and toxic pollutants prior to and during startup of the project.

The Sewer Authority submitted comments (Appendix B) on a draft order circulated for review. We prepared a Response to Comments (Appendix C) and revised the draft order where appropriate. We expect this item to remain uncontested.

RECOMMEN-
DATION: Adoption of the Revised Tentative Order

FILE: CW-244566

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. R2-2017-XXXX
NPDES No. CA0038598**

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

Table 1. Discharger Information

Discharger	Sewer Authority Mid-Coastside
Facility Name	Sewer Authority Mid-Coastside Wastewater Treatment Plant (WWTP) and Intertie Pipeline System
Facility Address	1000 N. Cabrillo Highway
	Half Moon Bay, CA 94019
	San Mateo County

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Secondary treated effluent and reverse osmosis concentrate	37° 28' 23"	122° 27' 00"	Pacific Ocean

Table 3. Administrative Information

This Order was adopted on:	<DATE>
This Order shall become effective on:	January 1, 2018
This Order shall expire on:	December 31, 2022
CIWQS Regulatory Measure Number	XX
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:	April 5, 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:	Major

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

Bruce H. Wolfe, Executive Officer

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I. FACILITY INFORMATION

Information describing the Sewer Authority Mid-Coastside Wastewater Treatment Plant and its collection system (collectively, the 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 submitted as part of the application, 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 and G are also incorporated into this Order.
- C. 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.
- D. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Order No. R2-2012-0061 (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 violations of the previous order.

III. DISCHARGE PROHIBITIONS

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

- C. Discharge at Discharge Point No. 001 is prohibited when treated wastewater does not receive an initial dilution of at least 180:1, as modeled. Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it (or its replacement, in whole or part) is in good working order and is consistent with or can achieve better mixing than that described in Fact Sheet section IV.C.3. The Discharger shall describe measures taken to ensure this in its application for permit reissuance.
- D. Average dry weather influent flow in excess of 4.0 MGD is prohibited. Average dry weather influent flow shall be determined from three consecutive dry weather months each year, with compliance measured at Monitoring Location INF-001 as described in the Monitoring and Reporting Program (MRP) (Attachment E).
- E. Any sanitary sewer overflow that results in a discharge of untreated or partially-treated wastewater to waters of the United States is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

- A. **Effluent Limitations.** The Discharger shall comply with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 or EFF-001D as described in the MRP:

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Six-Month Median
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	30	45	--	--	--	--
Total Suspended Solids	mg/L	30	45	--	--	--	--
pH ^[1]	s.u.	--	--	--	6.0	9.0	--
Total Chlorine Residual	mg/L	--	--	0.64	--	4.8	0.36
	kg/day	--	--	9.7	--	--	5.4
Acute Toxicity	TUa	--	--	2.7	--	--	--
Chronic Toxicity	TUc	--	--	80	--	--	--

Unit Abbreviations:

- mg/L = milligrams per liter
- s.u. = standard units
- kg/day = kilograms per day

Footnote:

^[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.

- B. **Percent Removal.** The average monthly biochemical oxygen demand (5-day @ 20°C) (BOD₅) and total suspended solids (TSS) percent removal at Discharge Point No. 001 shall not be less than 85 percent (i.e., in each calendar month, the arithmetic mean of BOD₅ and TSS, by concentration, for effluent samples collected at Monitoring Location EFF-001 or EFF-001D as described in the MRP, shall not exceed 15 percent of the arithmetic mean of BOD₅ and TSS, by

concentration, for influent samples collected at Monitoring Location INF-001 as described in the MRP at approximately the same times during the same period).

- C. Enterococcus Bacteria.** The 30-day geometric mean enterococcus bacteria density shall not exceed 2,800 most probable number (MPN) per 100 mL. No single sample shall exceed 8,300 MPN/100 mL.

The rolling 30-day geometric mean shall be calculated from the five (5) most recent samples collected, even if a sample falls outside the 30-day period. If more than five samples are collected within a 30-day period (e.g., when accelerated monitoring is required), the 30-day geometric mean shall be calculated using all the samples collected during the 30-day period.

V. RECEIVING WATER LIMITATIONS

- A.** The discharge shall not cause the following conditions to exist in receiving waters. Compliance shall be determined from samples collected at receiving water monitoring locations described in the MRP:
- 1.** Floating particulates and oil and grease shall not be visible.
 - 2.** The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.
 - 3.** Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.
 - 4.** The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
 - 5.** The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally as a result of the discharge of oxygen demanding waste materials.
 - 6.** The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.
 - 7.** The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.
 - 8.** The concentrations of substances listed in Ocean Plan Table 1 in marine sediment shall not be increased to levels that would degrade indigenous biota.
 - 9.** The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.
 - 10.** Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.
 - 11.** Discharges shall not cause exceedances of water quality objectives listed in Ocean Plan Table 1 in ocean waters.

12. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.
 13. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.
 14. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.
 15. Discharge of low-level radioactive waste shall not degrade marine life.
- B.** 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 included in Attachment D.
2. The Discharger shall comply with all applicable provisions of the “Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Wastewater Discharge Permits” (Attachment G).

B. Monitoring and Reporting Program (MRP) Requirements

1. **Monitoring and Reporting Program.** The Discharger shall comply with the MRP (Attachment E), and future revisions thereto, and applicable sampling and reporting requirements in Attachments D and G.
2. **Monterey Bay National Marine Sanctuary (MBNMS).** In addition to reporting to the Regional Water Board, the Discharger shall also concurrently notify the MBNMS office in Monterey, in writing, about any violations of this Order’s effluent limitations, receiving water limitations, and sludge management practices. The MBNMS shall be notified at the following address:

Permit Coordinator
Monterey Bay National Marine Sanctuary
99 Pacific Street, Building 455A
Monterey, CA 93940
(831) 647-4251

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. As new or revised water quality objectives or Total Maximum Daily Loads (TMDLs) come into effect for surface waters of the State (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect updated water quality objectives and wasteload allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted water quality objectives, 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. If the Discharger requests adjustments in effluent limits due to the implementation of stormwater diversion pursuant to the Municipal Regional Stormwater Permit (Permit No. CAS612008) for redirecting dry weather and first flush discharges from the storm drain system to the sanitary sewer system as a stormwater pollutant control strategy;
- g. 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 point to verify that the 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 stations set forth below, as defined in the MRP, at no less than the frequency specified below (if the Recycled Water Project operates during the calendar year, the Discharger shall collect the sample when the Recycled Water Project is operating):

<u>Discharge Point</u>	<u>Monitoring Location</u>	<u>Minimum Frequency</u>
001	EFF-001 or EFF-001D	1/Year

The samples shall be analyzed for the pollutants listed in Ocean Plan Table 1, except for those pollutants with effluent limitations for which the MRP already requires more frequent monitoring. Compliance with this requirement shall be achieved in accordance with the specifications of Attachment G sections III.A.1 and III.A.2 and MRP section VIII.D.

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

b. Reporting Requirements

- i. Routine Reporting.** The Discharger shall 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 priority pollutants detected at or above applicable water quality objectives (see Fact Sheet Table F-7 for the water quality objectives) 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. Pollutant Minimization Program

- a.** The Discharger shall prepare a Pollutant Minimization Program to promote minimization of pollutant loadings to the treatment plant and therefore to the receiving waters.
- b.** The Discharger shall submit an annual report no later than February 28 each year, with the first report due February 28, 2019. Each annual report shall include at least the following information:

- i. Brief description of treatment plant.** The description shall include the service area and treatment plant processes.
- ii. Discussion of current pollutants of concern.** Periodically, the Discharger shall analyze its circumstances to determine which pollutants are currently a problem and which pollutants may be potential future problems. This discussion shall include the reasons for choosing the pollutants.
- iii. Identification of sources for pollutants of concern.** This discussion shall include how the Discharger intends to estimate and identify pollutant sources. The Discharger shall include sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply and air deposition.
- iv. Identification of tasks to reduce the sources of pollutants of concern.** This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks by itself or participate in group, regional, or national tasks that address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that address its pollutants of concern whenever it is efficient and appropriate to do so. An implementation timeline shall be included for each task.
- v. Outreach to employees.** The Discharger shall inform employees about the pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants of concern into the Facility. The Discharger may provide a forum for employees to provide input.
- vi. Continuation of Public Outreach Program.** The Discharger shall prepare a pollution prevention public outreach program for its service area. Outreach may include participation in existing community events, such as county fairs; initiating new community events, such as displays and contests during Pollution Prevention Week; conducting school outreach programs; conducting plant tours; and providing public information in newspaper articles or advertisements, radio or television stories or spots, newsletters, utility bill inserts, or web sites. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.
- vii. Discussion of criteria used to measure Pollutant Minimization Program and task effectiveness.** The Discharger shall establish criteria to evaluate the effectiveness of its Pollutant Minimization Program. This discussion shall identify the specific criteria used to measure the effectiveness of each task in Provisions VI.C.3.b.iii, iv, v, and vi.
- viii. Documentation of efforts and progress.** This discussion shall detail all of the Discharger's Pollutant Minimization Program activities during the reporting year.
- ix. Evaluation of Pollutant Minimization Program and task effectiveness.** This Discharger shall use the criteria established in Provision VI.C.3.b.vii to evaluate the program and task effectiveness.

- x. Identification of specific tasks and timelines for future efforts.** Based on the evaluation, the Discharger shall explain how it intends to continue or change its tasks to more effectively reduce the amount of pollutants flowing to the Facility and, subsequently, in its effluent.
- c.** The Discharger shall develop and conduct a Pollutant Minimization Program as described below when there is evidence that a priority pollutant is present in the effluent above an effluent limitation (e.g., sample results reported as detected but not quantified [DNQ] when the effluent limitation is less than the method detection limit [MDL], sample results from analytical methods more sensitive than those methods required by this Order, presence of toxicity, health advisories for fish consumption, or results of benthic or aquatic organism tissue sampling) and either:

 - i.** A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or
 - ii.** A sample result is reported as not detected (ND) and the effluent limitation is less than the MDL.
- d.** If triggered by the reasons set forth in Provision VI.C.3.c, the Discharger's Pollutant Minimization Program shall include, but not be limited to, the following actions and submittals:

 - i.** Annual review and semiannual monitoring of potential sources of the reportable pollutant, which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures when source monitoring is unlikely to produce useful analytical data;
 - ii.** Quarterly monitoring for the reportable pollutant in treatment plant influent. U.S. EPA or the Regional Water Board Executive Officer may approve alternative measures when influent monitoring is unlikely to produce useful analytical data;
 - iii.** Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant in the effluent at or below the effluent limitation;
 - iv.** Implementation of appropriate cost-effective control measures for the reportable pollutant, consistent with the control strategy; and
 - v.** Inclusion of the following within the annual report required by Provision VI.C.3.b:

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

4. Special Provisions for Publicly-Owned Treatment Works (POTWs)

a. Sludge and Biosolids Management

- i. Sludge and biosolids treatment, storage, and disposal, or reuse, shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.
 - ii. Sludge and biosolids treatment and storage facilities shall be adequate to divert surface runoff from adjacent areas, to protect site boundaries from erosion, and to prevent conditions that would cause drainage from stored materials. Adequate protection is defined as protection from at least a 100-year storm and the highest possible tidal state or storm surge that may occur.
 - iii. This Order does not authorize permanent onsite sludge or biosolids storage or disposal. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity.
- b. Collection System Management.** The Discharger is subject to the requirements of, and shall comply with, State Water Board Order 2006-0003-DWQ, "Statewide General Waste Discharge Requirements for Sanitary Sewer Systems," including monitoring and reporting requirements as amended by State Water Board Order WQ 2013-0058-EXEC and any subsequent order.
- c. Resource Recovery from Anaerobically-Digestible Material.** If the Discharger receives hauled-in anaerobically-digestible material for injection into an anaerobic digester, the Discharger shall notify the Regional Water Board and develop and implement Standard Operating Procedures for this activity. The Standard Operating Procedures shall be developed prior to receiving hauled-in anaerobically-digestible material. The Standard Operating Procedures shall address material handling, including unloading, screening, or other processing prior to anaerobic digestion; transportation; spill prevention; spill response; avoidance of the introduction of materials that could cause interference, pass through, or upset of the treatment processes; avoidance of the introduction of materials that could cause interference, pass through, or upset of the treatment processes; avoidance of prohibited material; vector control; odor control; operation and maintenance; and the disposition of any solid waste segregated from introduction to the digester. The Discharger shall train its staff on the Standard Operating Procedures and shall maintain records for a minimum of three years for each load received, describing the hauler, waste type, and quantity received. In addition, the Discharger shall maintain records for a minimum of three years for the disposition, location, and quantity of cumulative pre-digestion-segregated solid waste hauled offsite.

5. Recycled Water Project

- a. **Start-Up.** If the Discharger completes construction of the Recycled Water Project (as described in Fact Sheet section II.E), it shall notify the Regional Water Board prior to commencing Recycled Water Project operations. The notification shall specify the anticipated date the operations will commence, describe the project as constructed, and

include documentation that concentrate (“reject water”) from the reverse osmosis process will completely mix with treated wastewater prior to Monitoring Location EFF-001 and EFF-001D. Within 120 days of commencing the Recycled Water Project, the Discharger shall submit a technical report that includes the following:

- i. Volume of reverse osmosis concentrate relative to treated wastewater for worst-case conditions;
 - ii. Acute and chronic toxicity test results that use worst-case conditions (maximum reverse osmosis concentrate to treated wastewater ratio);
 - iii. Reverse osmosis concentrate concentrations for pollutants listed in Ocean Plan Table 1;
 - iv. Analysis of whether pollutant concentrations will trigger reasonable potential under worst-case conditions for the water quality objectives listed in Fact Sheet Table F-7; and
 - v. Documentation that the Discharger will comply with all effluent limits (including acute and chronic toxicity) under worst-case conditions.
- b. Dilution Study.** If construction of the Recycled Water Project (as described in Fact Sheet section II.E) is completed within the term of this order, the Discharger shall submit an updated dilution study that reflects flow and effluent characteristics when the Recycled Water Project is operational.

ATTACHMENT A – DEFINITIONS

Acute Toxicity

- a. Acute Toxicity, expressed in Toxic Units Acute (TUa):

$$TUa = \frac{100}{96\text{-hr LC } 50\%}$$

- b. Lethal Concentration 50% (LC₅₀)

Percent waste giving 50% survival of test organisms (to be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Ocean Plan Appendix III. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC₅₀ may be determined after the test samples are adjusted to remove the influence of those substances.)

When impossible to measure the 96-hour LC₅₀ due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log(100 - S)}{1.7}$$

where:

S = percentage survival in 100% waste. If S > 99, TUa shall be reported as zero.

Areas of Special Biological Significance (ASBS)

Areas designated by the State Water Resources Control Board (State Water Board) as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also State Water Quality Protection Areas.

Arithmetic Mean (μ)

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

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

Average Monthly Effluent Limitation (AMEL)

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)

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.

Chlordane

Sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chronic Toxicity

Parameter used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

- a. Chronic Toxicity, expressed as Toxic Units Chronic (TUc):

$$TUc = \frac{100}{NOEL}$$

- b. No Observed Effect Level (NOEL)

The NOEL is the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix II.

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.

DDT

Sum of 4,4’DDT, 2,4’DDT, 4,4’DDE, 2,4’DDE, 4,4’DDD, and 2,4’DDD.

Degrade

Degradation shall be determined by comparison of the waste field and reference site or sites for characteristic species diversity, population density, contamination, growth anomalies, debility, or supplanting of normal species by undesirable plant and animal species. Degradation occurs if there are significant differences in any of three major biotic groups, namely, demersal fish, benthic invertebrates, or attached algae. Other groups may be evaluated where benthic species are not affected, or are not the only ones affected.

Detected, but Not Quantified (DNQ)

Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dichlorobenzenes

Sum of 1,2-dichlorobenzene and 1,3-dichlorobenzene.

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.

Downstream Ocean Waters

Waters downstream with respect to ocean currents.

Dredged Material

Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as "spoil."

Enclosed Bays

Indentations along the coast that enclose an area of oceanic water within 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, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan

Sum of endosulfan-alpha, endosulfan-beta, and endosulfan sulfate.

Estuaries and Coastal Lagoons

Waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include, but are not limited to, the Sacramento-San Joaquin Delta as defined by Water Code section 12220, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Halomethanes

Sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).

HCH

Sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

Initial Dilution

Process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the Regional Water Board, whichever results in the lower estimate for initial dilution.

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).

Kelp Beds

For purposes of the Ocean Plan bacteriological standards, significant aggregations of marine algae of the genera *Macrocystis* and *Nereocystis*. Kelp beds include the total foliage canopy of *Macrocystis* and *Nereocystis* plants throughout the water column.

Mariculture

Culture of plants and animals in marine waters independent of any pollution source.

Material

- (a) In common usage: (1) the substance or substances of which a thing is made or composed, (2) substantial
- (b) For Ocean Plan purposes relating to waste disposal, dredging, and the disposal of dredged material and fill: matter of any kind or description that is subject to regulation as waste or any material dredged from the navigable waters of the United States. See “dredged material.”

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.

Method Detection Limit (MDL)

Minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 C.F.R. part 136, Attachment B.

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.

Natural Light

Reduction of natural light may be determined by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the Regional Water Board.

Not Detected (ND)

Sample results less than the laboratory's MDL.

Ocean Waters

Territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to ensure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons)

Sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

PCBs (polychlorinated biphenyls)

Sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

Pollutant Minimization Program (PMP)

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 PMP goal shall be to reduce potential sources 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. The Regional Water Board may consider cost effectiveness when establishing PMP requirements. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), fulfill the PMP requirements.

Reporting Level (RL)

Minimum Level (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 (also known as the "Reported Minimum Level"). The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected

either from Ocean Plan Appendix II in accordance with Ocean Plan chapter III.C.5.a or established in accordance with Ocean chapter III.C.5.b. 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.

Satellite Collection System

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which the sanitary sewer system is tributary.

Shellfish

Organisms identified by the California Department of Public Health as shellfish for public health purposes (i.e., mussels, clams and oysters).

Significant Difference

Statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-Month Median Effluent Limitation

Highest allowable moving median of all daily discharges for any 180-day period.

State Water Quality Protection Areas (SWQPAs)

Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All “Areas of Special Biological Significance” (ASBS) previously designated by the State Water Board in Resolutions 74-28, 74-32, and 75-61 are now also classified as SWQPAs and require the special protections the Ocean Plan affords.

TCDD Equivalents

Sum of the concentrations of chlorinated dibenzodioxins and chlorinated dibenzofurans multiplied by their respective Toxicity Equivalency Factors (TEFs) as listed in the table below:

$$\text{TCDD Equivalents} = \sum C_x \times \text{TEF}_x \times \text{BEF}_x$$

Where:

C_x = concentration of congener x

TEF_x = toxicity equivalency factor for congener x

Toxicity Equivalence Factors

Congener	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
1,2,3,7,8-penta CDD	0.5
1,2,3,4,7,8-hexa CDD	0.1
1,2,3,6,7,8-hexa CDD	0.1
1,2,3,7,8,9-hexa CDD	0.1
1,2,3,4,6,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
1,2,3,4,7,8 hexa CDF	0.1
1,2,3,6,7,8 hexa CDF	0.1
2,3,4,6,7,8 hexa CDF	0.1
1,2,3,7,8,9 hexa CDF	0.1
1,2,3,4,6,7,8 hepta CDF	0.01
1,2,3,4,7,8,9 hepta CDF	0.01
octa CDF	0.001

This definition of TCDD equivalents supersedes the definition of dioxin-TEQ in Attachment G.

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.

Waste

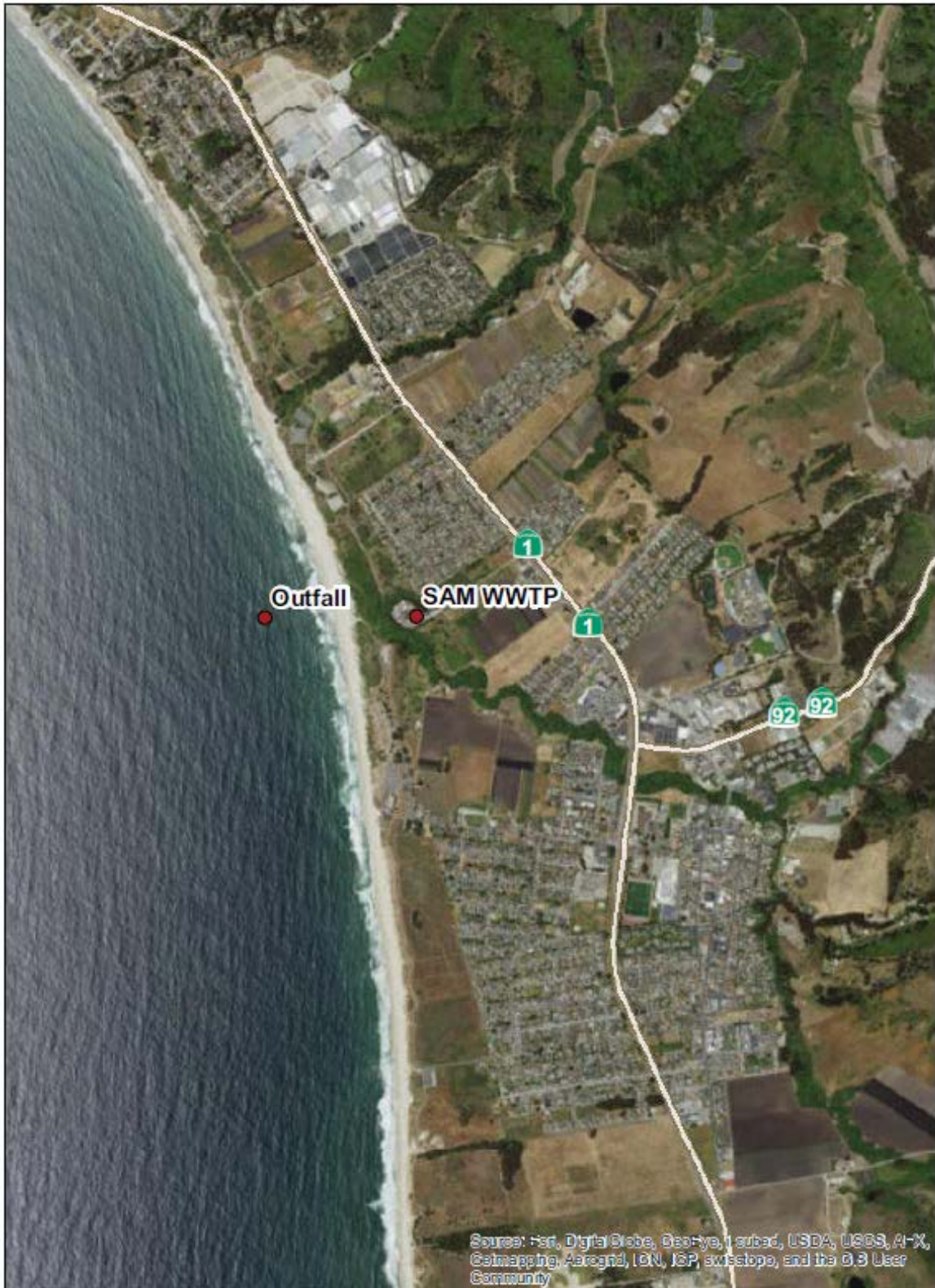
As used in the Ocean Plan, a Discharger’s total discharge, of whatever origin (i.e., gross, not net, discharge).

Water Recycling

Treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

ATTACHMENT B – FACILITY MAP

Figure B-1. Facility and Outfall Location

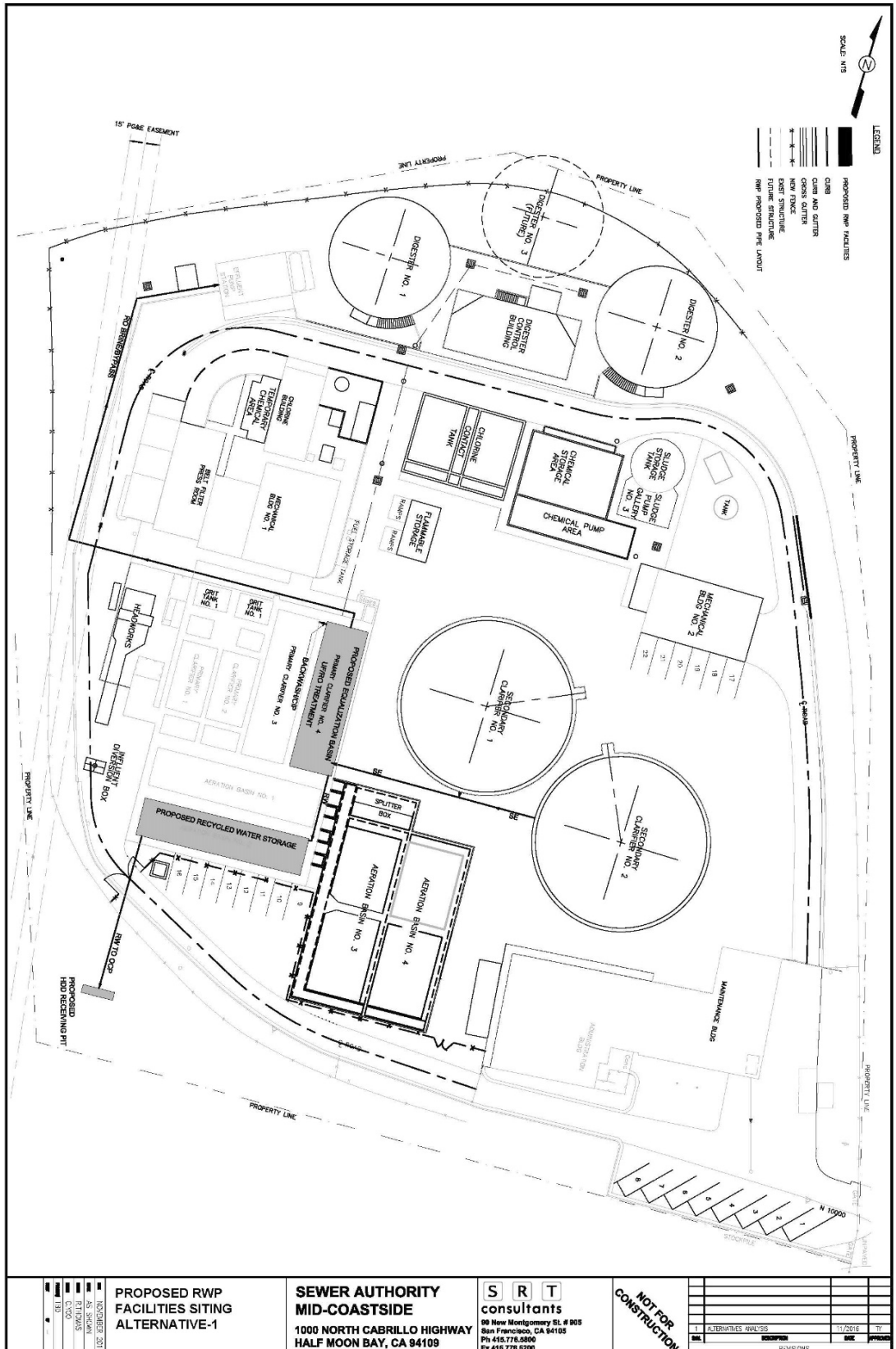


Source: Esri, Digital Globe, GeoEye, IGN, USDA, USGS, AeroX, Getmapping, Aerognd, IGN, IGP, swisstopo, and the GIS User Community

Figure B-2. Wastewater Treatment Plant Layout



Figure B-3. Proposed Site Layout with Recycled Water Project



ATTACHMENT C – PROCESS FLOW DIAGRAM

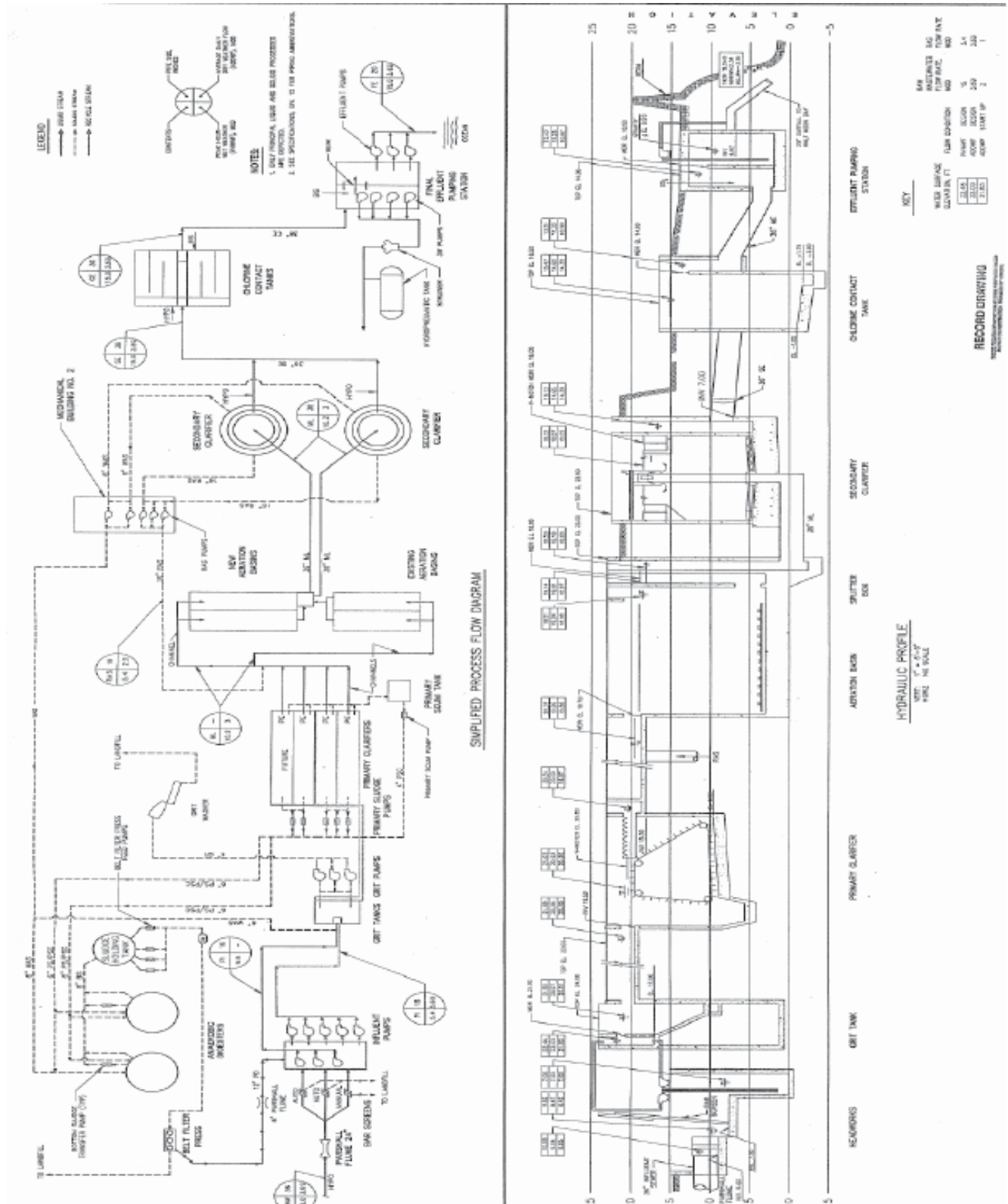
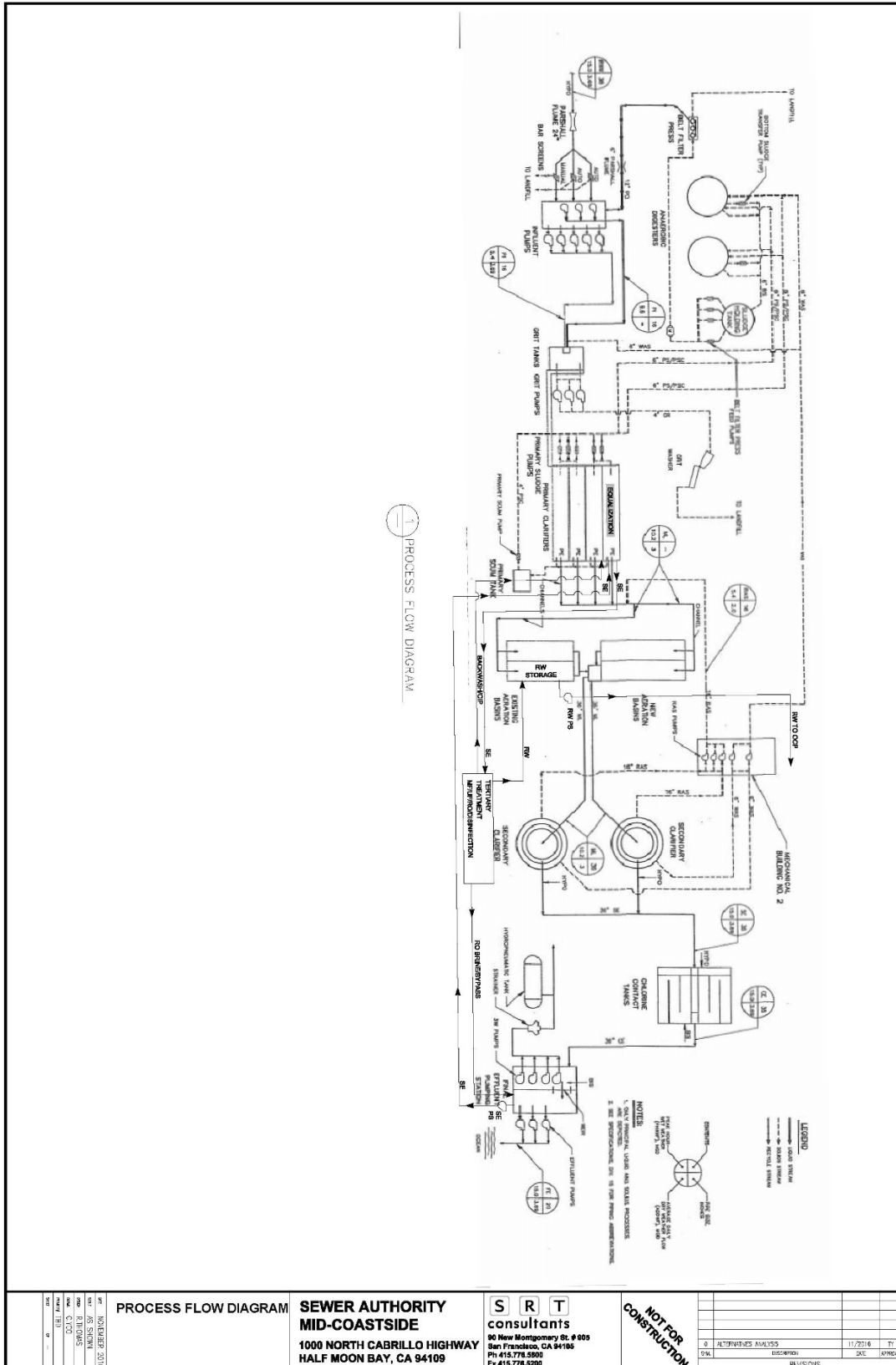


Figure C-2. Proposed Process Flow Diagram with Recycled Water Project



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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2)); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of ensuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

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

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

- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. **Approval.** The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions—Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

- a. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit 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 the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 122.41(l)(3), 122.61.)

III. STANDARD PROVISIONS – MONITORING

- A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- B.** Monitoring 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 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. (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 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 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. (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 permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS—NOTIFICATION LEVELS

A. 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 (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 (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)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

This MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and State laws and regulations.

I. GENERAL MONITORING PROVISIONS

- A.** The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. sections 122.62, 122.63, and 124.5. If any discrepancies exist between this MRP and the “Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits” (Attachment G), this MRP shall prevail.
- B.** The Discharger shall conduct all monitoring in accordance with Attachment D section III, as supplemented by Attachment G. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. part 136 and must be specified in this permit.
- C.** The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the 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

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

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Influent	INF-001	Any point in the treatment plant headworks at which all waste tributary to the treatment system is present and preceding any phase of treatment, exclusive of any return flows or process side streams.
Effluent	EFF-001	Any point in the treatment plant outfall between the point of discharge and the point at which all waste tributary to the outfall is present and following dechlorination.
	EFF-001D	Any point in the treatment plant outfall after disinfection is complete and prior to dechlorination. This location maybe the same as Monitoring Location EFF-001.
Effluent	REC-001	Any point after full treatment, including disinfection, that represents all treated wastewater directed offsite for recycled water distribution and thus not discharged to the Pacific Ocean at Discharge Point No. 001.
Receiving Waters	RSW-001 through RSW-004	At the corners of a 500 foot x 500 foot square directly over the outfall having one side parallel to the shoreline. Monitoring Location RSW-001 shall be located at the northeastern corner and Monitoring Locations RSW-002 through RSW-004 shall be located at successive corners in a clockwise direction.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	RSW-005	A reference location approximately 7,500 feet north of the outfall parallel to the shoreline at Magellan Avenue.
Biosolids	BIO-001	Any point representative of biosolids for final disposal.

III. INFLUENT MONITORING REQUIREMENTS

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

Table E-2. Influent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MGD	Continuous	Continuous
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	C-24	1/Week
Total Suspended Solids	mg/L	C-24	2/Week

Unit Abbreviations:

MG = million gallons
MGD = million gallons per day
mg/L = milligrams per liter

Sample Types:

Continuous = Measured continuously, and recorded and reported daily
C-24 = 24-hour composite

Footnote:

- ^[1] The following flow information shall be reported in monthly self-monitoring reports:
- Daily average flow (MGD)
 - Total monthly flow volume (MG)

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treatment plant effluent at Monitoring Location EFF-001 or, for enterococcus, at Monitoring Location EFF-001D as follows:

Table E-3. Effluent Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow ^[1]	MGD	Continuous	Continuous
pH	s.u.	Grab	1/Day
Biochemical Oxygen Demand (5-day @ 20°C) ^[2]	mg/L	C-24	1/Week
Total Suspended Solids ^[2]	mg/L	C-24	2/Week
Total Chlorine Residual ^[3]	mg/L	Continuous	1/Hour
Oil and Grease	mg/L	Grab	1/Quarter
Total Ammonia (as N)	mg/L as N	C-24	1/Month
Enterococcus ^[4]	MPN/100 mL ^[5]	Grab	1/Week
Acute Toxicity ^[5]	TUa	Flow-through or Static Renewal	1/Year

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chronic Toxicity ^[6]	TUc	C-24	1/Year
TCDD Equivalents ^[7]	µg/L	Grab	1/Year

Unit Abbreviations:

MG = million gallons
 MGD = million gallons per day
 s.u. = standard units
 mg/L = milligrams per liter
 MPN/100 mL = Most Probable Number per 100 milliliters

Sample Types:

Continuous = Measured continuously, and recorded and reported daily
 C-24 = 24-hour composite
 Grab = Grab sample

Footnotes:

- ^[1] The following flow information shall be reported in monthly self-monitoring reports:
- Daily average flow rate (MGD)
 - Total monthly flow volume (MG)
- ^[2] BOD₅ and TSS percent removal shall be reported each month in accordance with Effluent Limitation IV.B.
- ^[3] Total chlorine residual concentrations shall be monitored continuously or, at a minimum, every hour. The Discharger shall describe all excursions of the chlorine limit in the transmittal letter of self-monitoring reports as required by Attachment G section V.C.1.a. If monitoring continuously, the Discharger shall report through data upload to CIWQS, from discrete readings of the continuous monitoring every hour on the hour, the maximum for each day and any other discrete hourly reading that exceeds the effluent limit, and, for the purpose of mandatory minimum penalties required by Water Code section 13385(i), compliance shall be based only on these discrete readings. The Discharger shall retain continuous monitoring readings for at least three years. The Regional Water Board reserves the right to use all continuous monitoring data for discretionary enforcement.
- The Discharger may elect to use a continuous on-line monitoring system for measuring or determining that residual dechlorinating agent is present. This monitoring system may be used to prove that anomalous residual chlorine exceedances measured by on-line chlorine analyzers are false positives and are not valid total chlorine residual detections because it is chemically improbable to have chlorine present in the presence of sodium bisulfite. If Regional Water Board staff finds convincing evidence that chlorine residual exceedances are false positives, the exceedances are not violations of this Order's total chlorine residual limit.
- ^[4] When replicate analyses are made for a bacteria sample, the reported result shall be the geometric mean of the replicate analyses.
- ^[5] Acute bioassay tests shall be performed in accordance with MRP section V.A.
- ^[6] Chronic toxicity test shall be performed in accordance with MRP section V.A.
- ^[7] Defined in Attachment A of this Order.

V. TOXICITY MONITORING REQUIREMENTS

A. Acute Toxicity

1. Compliance with the acute toxicity effluent limitations shall be evaluated at Monitoring Location EFF-001 by measuring survival of test organisms exposed to 96-hour continuous flow-through or static renewal bioassays.
2. Test organisms shall be inland silverside (*Menidia beryllina*). Alternatively, the Executive Officer may specify a more sensitive organisms or, if testing a particular organism proves unworkable, the most sensitive organism available.
3. All bioassays shall be performed according to the most up-to-date protocols in 40 C.F.R. part 136, currently *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, 5th Edition (EPA-821-R-02-012). If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory

Accreditation Program may grant exceptions in writing upon the Discharger's request with justification.

4. If the Discharger demonstrates that specific identifiable substances in the discharge are rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after test samples are adjusted to remove the influence of those substances. Written acknowledgement that the Executive Officer concurs with the Discharger's demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment. The Discharger may manually adjust the pH of acute toxicity samples prior to performing bioassays to minimize ammonia toxicity interference.
5. Bioassay water monitoring shall include, on a daily basis, pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms is less than 70 percent), the Discharger shall initiate a new test as soon as practical and shall investigate the cause of the mortalities and report its findings in the next self-monitoring report. The Discharger shall repeat the test until a test fish survival rate of 90 percent or greater is observed. If the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new fish and shall continue as soon as practical until an acceptable test is completed (i.e., control fish survival rate is 90 percent or greater).

B. Chronic Toxicity

1. Monitoring Requirements

- a. **Sampling.** The Discharger shall collect 24-hour composite effluent samples at Monitoring Location EFF-001D for critical life stage toxicity tests as indicated below. For toxicity tests requiring renewals, the Discharger shall collect 24-hour composite samples on alternating days.
- b. **Test Species.** The test species shall be the sheepshead minnow (*Cyprinodon variegatus*) unless a more sensitive species is identified. If using this species proves unworkable, the Executive Officer may specify a different species in writing upon the Discharger's request with justification.

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

- c. Frequency.** Chronic toxicity monitoring shall be as specified below:
- i.** The Discharger shall monitor routinely once per year.
 - ii.** The Discharger shall accelerate monitoring to monthly after exceeding the effluent limit of 80 TUC. Based on the TUC results, the Executive Officer may specify a different frequency for accelerated monitoring to ensure that accelerated monitoring provides useful information.
 - iii.** The Discharger shall return to routine monitoring if accelerated monitoring does not exceed the trigger in ii, above.
 - iv.** If accelerated monitoring confirms consistent toxicity in excess of the effluent limit in ii above, the Discharger shall continue accelerated monitoring and initiate toxicity reduction evaluation (TRE) procedures in accordance with section V.C, below.
 - v.** The Discharger shall return to routine monitoring after implementing appropriate elements of the TRE and either the toxicity drops below the effluent limit in b, above, or, based on the TRE results, the Executive Officer determines that accelerated monitoring would no longer provide useful information.

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

- d. 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. If these protocols prove unworkable, the Executive Officer and the Environmental Laboratory Accreditation Program may grant exceptions in writing upon the Discharger's request with justification.

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

- e. Dilution Series.** The Discharger shall conduct tests with a control and concentrations of 0.32%, 0.63%, 1.3%, 2.6%, and 5.2%. The "%" represents percent effluent as discharged. Test sample pH may be controlled to the level of the effluent sample as received prior to being salted up.

2. Reporting Requirements

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

- i. Sample date
- ii. Test initiation date
- iii. Test species
- iv. End point values for each dilution (e.g., number of young, growth rate, percent survival)
- v. 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. TU_c values (100/NOEL, where NOEL = IC₂₅, EC₂₅, or NOEC)
- 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)

3. Toxicity Reduction Evaluation (TRE)

- a. The Discharger shall prepare a generic TRE work plan within 90 days of the effective date of this Order to be ready to respond to toxicity events. The Discharger shall review and update the work plan as necessary so that it remains current and applicable to the discharge and discharge facilities.
- b. Within 30 days of exceeding the chronic toxicity effluent limit, the Discharger shall submit a TRE work plan, which shall be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.
- c. Within 30 days of completing an accelerated monitoring test observed to exceed the effluent limit, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all Executive Officer comments.
- d. The TRE shall be specific to the discharge and be in accordance with current technical guidance and reference materials, including U.S. EPA guidance materials. The Discharger shall conduct the TRE as a tiered evaluation as summarized below:
 - i. Tier 1 shall consist of basic data collection (routine and accelerated monitoring).
 - ii. Tier 2 shall consist of evaluation of treatment process, including operational practices and in-plant process chemicals.

- iii. Tier 3 shall consist of a toxicity identification evaluation (TIE).
- iv. Tier 4 shall consist of a toxicity source evaluation.
- v. Tier 5 shall consist of a toxicity control evaluation, including options for modifications of in-plant treatment processes.
- vi. Tier 6 shall consist of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
- e. The TIE or TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with Effluent Limitations and Discharge Specifications IV.A of this Order).
- f. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. The Discharger shall employ all reasonable efforts using currently available TIE methodologies.
- g. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the toxic substances from the discharge. The Discharger shall take all reasonable steps to reduce toxicity to levels below the chronic toxicity limit.
- h. Many recommended TRE elements parallel required or recommended efforts related to source control, pollution prevention, and stormwater control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to demonstrate compliance with TRE requirements.

VI. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor the Pacific Ocean at Monitoring Locations RSW-001, RSW-002, RSW-003, RSW-004, and RSW-005 as follows:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	standard units	Grab	1/Year
Temperature	°C	Grab	1/Year
Dissolved Oxygen	mg/L, % saturation	Grab	1/Year
Salinity	ppt	Grab	1/Year
Ammonia (as N)	mg/L	Grab	1/Year
Enterococcus	MPN/100 mL	Grab	1/Year
Standard Observations ^[1]	--	--	1/Year

Unit Abbreviations:

- °C = degree Celsius
- mg/L = milligrams per liter
- % saturation = percent saturation of dissolved oxygen in water
- ppt = parts per thousand

MPN/100 mL = Most Probable Number per 100 milliliters

Sample Types:

Grab = Grab sample

Footnote:

^[1] Standard observations shall be recorded as specified in Attachment G section III.C.1.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

B. Self-Monitoring Reports (SMRs)

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

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

- b. **Annual SMR** — Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the items described in sections V.C.1.f of the Regional Standard Provisions (Attachment G). See also Provisions VI.C.2 (Effluent Characterization Study and Report) of the Order for requirements to submit reports with the annual SMR.
 - c. **Additional Specifications for Submitting SMRs to CIWQS.** The Discharger shall submit analytical results and other information using one of the following methods:

Table E-5. CIWQS Reporting

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for all results	
Dissolved Oxygen Temperature	Required for monthly maximum and minimum results only ^[1]	Discharger may use this method for all results or keep records
Antimony Arsenic Beryllium Cadmium Chromium Copper Cyanide Lead Mercury Nickel Selenium	Silver Thallium Zinc Dioxins & Furans (by U.S. EPA Method 1613) Other Pollutants (by U.S. EPA methods 601, 602, 608, 610, 614, 624, and 625)	Required for all results ^[2]
Volume and Duration of Blended Discharge ^[3]	Required for all blended effluent discharges	
Analytical Method	Not required (Discharger may select “data unavailable”) ^[1]	
Collection Time Analysis Time	Not required (Discharger may select “0:00”) ^[1]	

Footnotes:

- ^[1] The Discharger shall continue to monitor at the minimum frequency specified in this MRP, keep records of the measurements, and make the records available upon request.
- ^[2] These parameters require EDF/CDF data upload or manual entry regardless of whether monitoring is required by this MRP or other provisions of this Order (except for biosolids, sludge, or ash provisions).
- ^[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.

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

Table E-6. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Continuous	Order effective date	All times
1/Hour	Order effective date	Every one-hour period, beginning at midnight through 11:59 p.m. (or any 24-hour period that reasonably represents a calendar day for purposes of sampling)
1/Day	Order effective date	Every 24-hour period, beginning at midnight and continuing through 11:59 p.m. (or any 24-hour period that reasonably represents a calendar day for purposes of sampling)
1/Week or 2/Week	First Sunday following or on Order effective date	Sunday through Saturday
1/Quarter	Closest January 1, April 1, July 1, October 1 before or after permit effective date ^[1]	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31
1/Year	Closest January 1 before or after permit effective date ^[1]	January 1 through December 31

Footnote:

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

4. **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.

5. **Compliance Determination.** Compliance with effluent limitations shall be determined using sample reporting protocols defined in Attachment A – Definitions, Attachment D – Standard

Provisions, Attachment E – Monitoring and Reporting Program, Attachment F – Fact Sheet, and Attachment G – Regional Standard Provisions. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to any corresponding reported Reporting Level.

C. Discharge Monitoring Reports (DMRs)

DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any 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.

VIII. MODIFICATIONS TO ATTACHMENT G

This MRP modifies Attachment G as indicated below:

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

- 2) When determining compliance with an average monthly or maximum daily effluent limitation, and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - ii. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

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

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

f. Annual self-monitoring report requirements

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

- 1) Annual compliance summary table of treatment plant performance, including documentation of any blending events (this summary table is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);
- 2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);
- 3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater (this item is not required if the Discharger has submitted the year's monitoring results to CIWQS in electronic reporting format by EDF/CDF upload or manual entry);
- 4) List of approved analyses, including the following:
 - (i) List of analyses for which the Discharger is certified;
 - (ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and
 - (iii) List of "waived" analyses, as approved;
- 5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;
- 6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all stormwater to the headworks of its wastewater treatment plant); and
- 7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or

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

g. Report submittal

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

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

h. Reporting data in electronic format – *Deleted*

C. Attachment G sections V.E.2, V.E.2.a, and V.E.2.c are revised as follows, and sections V.E.2.b (24-hour Certification) and V.E.2.d (Communication Protocol) are deleted:

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants¹

The following requirements apply to municipal wastewater treatment plants that experience an unauthorized discharge at their treatment facilities and supersede requirements imposed on the Discharger by the Executive Officer by letter of May 1, 2008.

a. Two (2)-Hour Notification

For any unauthorized discharges that enter a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the California Office of Emergency Services (CalOES, currently 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. Timely notification by the Discharger to CalOES also satisfies notification to the Regional Water Board. Notification shall include the following:

- 1) Incident description and cause;
- 2) Location of threatened or involved waterway(s) or storm drains;
- 3) Date and time the unauthorized discharge started;
- 4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;

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

- 5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfectated secondary treated, and so on); and
 - 6) Identity of the person reporting the unauthorized discharge.
- b. 24-hour Certification – *Deleted*
- c. 5-day Written Report

Within five business days, the Discharger shall submit a written report that includes, in addition to the information required above, the following:

- 1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;
 - 2) Efforts implemented to minimize public exposure to the unauthorized discharge;
 - 3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;
 - 4) Corrective measures taken to minimize the impact of the unauthorized discharge;
 - 5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;
 - 6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and
 - 7) Quantity and duration of the unauthorized discharge, and the amount recovered.
- d. Communication Protocol – *Deleted*

D. Attachment G Table C. List of Monitoring Parameters and Analytical Methods. The discharger shall comply with the minimum levels listed in Ocean Plan Appendix II in lieu of those listed in Attachment G.

**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 five 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 50%, 5.2%, 2.6%, 1.3%, 0.63%, 0.32%, and 0%, where “%” is percent effluent as discharged, or as otherwise approved by the Executive Officer if different dilution ratios are needed to reflect discharge conditions.
- C. The Discharger shall submit a screening phase proposal. The proposal shall address each of the elements listed above. If within 30 days, the Executive Officer does not comment, the Discharger shall commence with screening phase monitoring.

APPENDIX E-2
SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

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

Species	(Scientific Name)	Effect	Test Duration	Reference
Alga	<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 ^[1]	
		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 ^[2] Marine/Estuarine	0 4	1 or 2 3 or 4	3 0
Total number of tests	4	5	3

Footnotes:

- ^[1] (a) Marine refers to receiving water salinities greater than 10 part per thousand (ppt) at least 95 percent of the time during a normal water year.
(b) Freshwater refers to receiving water with salinities less than 1 ppt at least 95 percent of the time during a normal water year.
(c) Estuarine refers to receiving water salinities that fall between those of marine and freshwater, as described above.
- ^[2] The freshwater species may be substituted with marine species if:
 - (a) The salinity of the effluent is above 1 ppt greater than 95 percent of the time, or
 - (b) The ionic strength (TDS or conductivity) of the effluent at the test concentration used to determine compliance is documented to be toxic to the test species.

ATTACHMENT F - FACT SHEET

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ATTACHMENT F – FACT SHEET

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility:

Table F-1. Facility Information

WDID	2 417068001
CIWQS Place ID	255139
Discharger	Sewer Authority Mid-Coastside
Facility Name	Sewer Authority Mid-Coastside Wastewater Treatment Plant and its wastewater collection system
Facility Address	1000 N. Cabrillo Highway
	Half Moon Bay, CA 94019
	San Mateo County
Facility Contact, Title, Phone	Beverli Marshall, General Manager, (650) 726-0124
Authorized Person to Sign and Submit Reports	Same as facility contact
Mailing Address	1000 N. Cabrillo Highway, Half Moon Bay, CA 94019
Billing Address	Same as mailing address
Facility Type	Publicly-Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N
Recycling Requirements	NA
Facility Permitted Flow	4.0 million gallons per day (MGD)
Facility Design Flow	4 MGD – average dry weather flow capacity
	15 MGD – peak wet weather peak capacity
Watershed	North San Mateo Coastal Watershed
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

- A. The Sewer Authority Mid-Coastside (Discharger) owns and operates the Sewer Authority Mid-Coastside Wastewater Treatment Plant and its wastewater collection system (collectively, the Facility). The Facility provides secondary treatment of wastewater collected from its service area and discharges to the Pacific Ocean.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and State laws, regulations, plans, or policies 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. CA0038598. The Discharger was previously subject to Order No. R2-2012-0061 (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 April 3, 2017.
- C.** The Discharger is authorized to discharge subject to the WDRs in this Order at the discharge location described in Table 2 of this Order. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. Pursuant to California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending permit reissuance if the Discharger complies with all requirements for continuation of expired permits. (See 40 C.F.R § 122.6[d].)

II. FACILITY DESCRIPTION

A. Wastewater and Biosolids Treatment

- 1. Location and Service Area.** The Discharger owns and operates the wastewater treatment plant located at 1000 North Cabrillo Highway in Half Moon Bay. The plant provides secondary treatment of domestic wastewater to a population of approximately 25,000 through three satellite collection systems: the City of Half Moon Bay, the Granada Community Services District, and the Montara Water and Sanitary District. Attachment B shows a map of the Facility area.

The plant has an average dry weather design capacity of 4 MGD and a peak wet weather capacity of 15 MGD. In 2016, the average daily flow was 1.64 MGD. The Discharger does not anticipate needing to increase its permitted flow within the next five years.

- 2. Collection System.** The collection system, also called the Intertie Pipeline System, is a separate sewer system comprised of approximately eight miles of force mains and gravity interceptors, and three pump stations. The City of Half Moon Bay, the Montara Water and Sanitary District, and the Granada Community Services District act independently under the direction of their governing boards and own, operate, and maintain the satellite sewer collection systems for their respective service areas.
- 3. Treatment Process.** The treatment system consists of influent screening, grit removal, primary clarification, activate sludge, secondary clarification, chlorination, and dechlorination.
- 4. Sludge Treatment and Biosolids Disposal.** Sludge is treated by anaerobic digestion and belt filter press dewatering and is disposed of at Ox Mountain Sanitary Landfill.
- 5. Stormwater Management.** The Discharger is not required to be covered under the State Water Board's statewide NPDES permit for stormwater discharges associated with industrial activities (NPDES General Permit CAS000001) because all stormwater at the plant and pump stations is collected and directed to the plant headworks for treatment.

B. Discharge Point and Receiving Waters

Discharge of treated wastewater to the Pacific Ocean is through a discharge pipe and a submerged, multi-port diffuser located west of Pilarcitos Creek, approximately 1,900 feet offshore (Discharge Point No. 001). The discharge pipe lies on ballast rock on the sea floor approximately 37 feet below mean lower low water (-37 MLLW) and is covered with sand much of the year due to seasonal sand drift. The final 238 feet of the outfall is a multi-port diffuser fitted with 35 6-inch rubber duck-bill valves, approximately 7 feet apart, that discharge vertically approximately 2 feet above the ocean floor.

C. Previous Requirements and Self-Monitoring Report (SMR) Data

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

Table F-2. Previous Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitations					Monitoring Data (10/2012 – 12/2016)				
		Six-Month Median	Monthly Avg.	Weekly Avg.	Daily Max.	Inst. Max.	Highest Six-Month Median	Highest Monthly Avg.	Highest Weekly Avg.	Highest Daily Max.	Highest Inst. Max.
Biochemical Oxygen Demand, 5-day @ 20°C (BOD ₅)	mg/L	--	30	45	--	--	--	24	30	--	--
Total Suspended Solids (TSS)	mg/L	--	30	45	--	--	--	12	18	--	--
Total Chlorine Residual	mg/L	0.36	--	--	0.64	4.8	0	--	--	0.038	3.35
	kg/d	5.4	--	--	9.7	--	0	--	--	0.50	--
pH	s.u.	within a range of 6.0 – 9.0					6.7 – 7.5 ^[1]				
Acute Toxicity	TUa	--	--	--	2.7	--	--	--	--	0.76	--
Chronic Toxicity	TUc	--	--	--	80	--	--	--	--	<19.2	--

Unit Abbreviations:

mg/L = milligrams per liter
kg/d = kilograms per day
s.u. = standard unit
TUa = acute toxicity units
TUc = chronic toxicity units

Footnotes:

^[1] The highest and lowest reported pH.

D. Compliance Summary

- 1. Treatment Plant.** The Discharger did not violate any effluent limitations in the previous order term.
- 2. Collection System.** The table below shows the Discharger’s sanitary sewer overflow (SSO) rates (total SSOs per 100 miles of collection system) for the last five years, the length and age of the collection system, and comparisons to other systems in the San Francisco Bay

Region. These data do not include a large SSO and other SSOs that occurred in 2017. SSOs that reach waters of the United States may violate Prohibition III.E of this Order.

Table F-3. Collection System and SSO Rates (SSO/100 miles)

(Values based on CIWQS data analysis completed in August 2017)

	Length (miles)	Average Age (years)	2012	2013	2014	2015	2016
Sewer Authority Mid-Coastside	7.5	47	40.0	13.3	26.7	0	26.7
San Mateo County median of 10 small systems (< 10 miles)	5.5	50	16.3	36.5	20.5	4.9	25.1
San Francisco Bay Region median of 37 small systems (< 10 miles)	4.8	44	13.6	15.3	10.5	2.9	17.9
San Francisco Bay Region median of all 133 systems	46	45	5.2	5.7	6.3	3.7	4.3

Based on the data for 2012 through 2016, the Discharger’s SSO rates were above the median of all San Francisco Bay Region collection systems and other small collection systems in San Mateo County. The average age of the Discharger’s collection system is 47 years, which is similar to small-sized collection systems in San Mateo County and the San Francisco Bay Region.

E. Planned Changes

The Discharger plans to develop a recycled water treatment process over the term of this Order. The Discharger will use a blend of ultrafiltration and reverse osmosis to further treat secondary-treated effluent and provide ultraviolet disinfection. The Discharger will route about 50 percent of its secondary-treated effluent through ultrafiltration and then about 50 percent of the ultrafiltration permeate through reverse osmosis. Permeate from ultrafiltration and reverse osmosis will be blended with the final effluent discharged. The proposed recycled water facility will be designed to meet an average demand of 550,000 gallons per day (gpd) and peak demand of 800,000 gpd and require the following new facilities:

- Secondary-treated effluent diversion pipeline to convey secondary-treated effluent from the secondary clarifiers to the recycled water treatment system;
- Secondary-treated effluent equalization basin to store secondary-treated effluent and accommodate diurnal flow variations while providing a constant influent flow to the recycled water treatment processes. The existing primary clarifier No. 4 (currently unused) will be rehabilitated and have a total volume of 160,000 gallons;
- Membrane filtration to meet recycled water treatment requirements;
- Conveyance to send reverse osmosis concentrate from recycled water treatment to the existing ocean outfall for disposal;
- Ultraviolet treatment to sterilize recycled water to protect public health and meet regulatory requirements;
- Recycled water storage to store the recycled water produced. Existing Aeration Basin No. 2 will be rehabilitated and have a total volume of 260,000 gallons; and

- Recycled water pumps and distribution pipeline to connect to existing facilities. A Recycled water distribution pipeline will be constructed under Pilarcitos Creek.

Water recycling operations will not increase the mass of pollutants discharged but could increase the concentration of pollutants discharged at Discharge Point No. 001. The requirements of this Order account for this potential recycled water project. Use of recycled water would be governed by the State Water Board’s Water Reclamation Requirements for Recycled Water Use (Order No. 2016-0068-DDW).

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 the 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 serves as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, 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, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and San Mateo Coastal Basin. The Basin Plan incorporates by reference the provisions of the California Ocean Plan, described below. Requirements in this Order implement the Basin Plan. Beneficial uses applicable to the Pacific Ocean and San Mateo Coastal Basin are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses
001	Pacific Ocean	<ul style="list-style-type: none"> Industrial Service Supply (IND) Ocean, Commercial and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Marine Habitat (MAR) 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. California Ocean Plan. The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and has amended

it several times, most recently in 2015. The most recent changes became effective on January 27, 2016. The Ocean Plan applies, in its entirety, to point source discharges to the Pacific Ocean. The Ocean Plan establishes water quality objectives and a program of implementation to protect beneficial uses. Requirements of this Order implement the Ocean Plan. Beneficial uses for the Pacific Ocean as described in the Ocean Plan are as follows:

Table F-5. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Uses	
001	Pacific Ocean	<ul style="list-style-type: none"> • Industrial water supply • Water contact and non-contact recreation, including aesthetic enjoyment • Navigation • Commercial and sport fishing • Mariculture 	<ul style="list-style-type: none"> • Preservation and enhancement of designated Areas of Special Biological Significance (ASBS) • Rare and endangered species • Marine habitat • Fish spawning • Shellfish harvesting

- 3. 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 section IV.D.2.)
- 4. 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 version of the permit, with some exceptions in which limitations may be relaxed. (See Fact Sheet section IV.D.1.)
- 5. 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 and endangered species. The Discharger is responsible for meeting requirements of the Endangered Species Act.
- 6. Sludge and Biosolids.** U.S. EPA administers 40 C.F.R. part 503, “Standards for the Use or Disposal of Sewage Sludge,” which regulates the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a municipal wastewater treatment

facility. This Order does not authorize any act that violates those requirements. The Discharger is responsible for meeting all applicable requirements of 40 C.F.R. part 503.

D. Impaired Waters on CWA 303(d) List

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

The Pacific Ocean at Half Moon Bay is not on the 303(d) list as an impaired water body. However, the Pacific Ocean at Venice Beach, approximately 1,000 feet north of the outfall, is 303(d) listed as impaired by coliform bacteria. The Regional Water Board plans to consider a TMDL for indicator bacteria at this location by 2019.

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 the receiving water.

A. Discharge Prohibitions

- 1. Prohibition III.A (Discharge different than described):** 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. Prohibition III.B (Bypass):** This prohibition is based on 40 C.F.R. section 122.41(m) (see Attachment D section I.G).
- 3. Prohibition III.C (Discharge without minimum initial dilution of at least 180:1):** This Order allows a dilution credit of 180:1 in the calculation of water quality-based effluent limitations based on the Discharger's *Technical Memorandum, Engineering for Outfall Initial Dilution Analysis* (March 25, 2008). Thus, this prohibition is necessary to ensure that the assumptions used to derive the dilution credit remain substantially the same so the limitations remain protective of water quality.

4. **Prohibition III.D (Discharge in excess of permitted flow):** This prohibition prohibits flows in excess of the Facility’s permitted average dry weather flow of 4.0 MGD. It ensures adequate treatment of wastewater in all circumstances anticipated by the Facility’s design. Exceeding the design capacity could lower treatment plant reliability with respect to complying with this Order’s requirements.

5. **Prohibition III.E (Sanitary sewer overflows):** This prohibition is based on Basin Plan Table 4-1 (Discharge Prohibition 15) and the CWA, which prohibit the discharge of wastewater to surface waters, except as authorized under an NPDES permit. Publicly-owned treatment works must achieve secondary treatment at a minimum and any more stringent limitations necessary to meet water quality standards (33 U.S.C. § 1311[b][1][B and C]). A sanitary sewer overflow that results in a surface water discharge of raw sewage or wastewater not meeting this Order’s effluent limitations is therefore prohibited under the CWA and the Basin Plan.

B. 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 applicable technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on the Secondary Treatment Standards at 40 C.F.R. part 133 and Ocean Plan Table 2 as listed in the table below:

Table F-6. Secondary Treatment Requirements

Parameter	Units	30-Day Average	7-Day Average
Biochemical Oxygen Demand (5-day at 20°C) (BOD ₅) ^[1]	mg/L	30 ^[2]	45
Carbonaceous Biochemical Oxygen Demand (5-day at 20°C) (CBOD ₅) ^[1]	mg/L	25 ^[2]	40
Total Suspended Solids ^[2]	mg/L	30 ^[2]	45
pH	s.u.	6.0 – 9.0	

Unit Abbreviation:

mg/L = milligrams per liter

s.u. = standard units

Footnotes:

^[1] The CBOD₅ requirements may be substituted in lieu of the BOD₅ requirements.

^[2] The monthly average percent removal, by concentration, is also not to be less than 85 percent.

This Order does not include effluent limits for grease and oil, settleable solids, and turbidity because Ocean Plan Table 2 only applies to publicly-owned treatment works for which effluent limitations guidelines have not been established.

2. Effluent Limitations

- a. **Biochemical Oxygen Demand (BOD₅).** The BOD₅ effluent limitations, including the 85 percent removal requirement, are based on the Secondary Treatment Standards at 40 C.F.R. section 133.102(a).
- b. **Total Suspended Solids (TSS).** The TSS effluent limitations, including the 85 percent removal requirement, are based on the Secondary Treatment Standards at 40 C.F.R. section 133.102(b).
- c. **pH.** The pH effluent limitation is based on 40 C.F.R. section 133.102(c) and Ocean Plan Table 2.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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 the designated uses of receiving waters as specified in the Basin Plan and the Ocean Plan.

2. Beneficial Uses and Water Quality Objectives

Fact Sheet sections III.C.1 and III.C.2, above, identify the beneficial uses of the Pacific Ocean. Ocean Plan section II (including Table 1) lists the water quality objectives for the Pacific Ocean. The Basin Plan incorporates these objectives by reference.

3. Minimum Initial Dilution

In accordance with Ocean Plan section III.C, WQBELs reflect the minimum initial dilution of the effluent as it reaches the receiving water. The minimum initial dilution can be estimated by experimental observation or computer simulation. The reasonable potential analysis and WQBEL calculations for this Order are based on *Technical Memorandum, Engineering for Outfall Initial Dilution Analysis* (March 2008), which estimated dilution at the Discharger's outfall under different flow conditions.

The study the Discharger provided on March 25, 2008, estimated initial dilution using ambient water data from oceanographic surveys conducted in 1976 during the planning and design of the outfall and diffuser. The study employed three methods, including U.S. EPA's *Visual Plumes* (4th edition), and concluded that the outfall exhibits a range of initial dilutions depending on discharge flow and tidal conditions. The study is based on a flow through the diffuser of 2.75 MGD. Based on data collected between October 2012 and December 2016, the Discharger's actual average monthly flow ranges from 1.18 to 3.02 MGD. These flows are reasonably close to that used for the study. At the flow of 2.75 MGD, the minimum initial dilution over the width of the plume is estimated to be 79:1 (79 parts total water after ocean and effluent mixing to 1 part effluent) under slack low tide and zero current (i.e., stagnant) ambient conditions. The dilution increases to at least 180:1 with a current speed of 10 centimeters per second, which is the lowest average speed measured at the diffuser from June through October 1976. The mixing zone under these two scenarios extends up to 21 feet from the outfall ports.

The Ocean Plan requires that dilution estimates be based on the assumption of no currents of sufficient strength to influence the initial dilution process. For this Order, a current speed of 10 centimeters per second is used to conservatively reflect ambient conditions when water quality objectives are expressed as six-month median. For other objectives, the more conservative stagnant (i.e., zero current) condition is assumed. Specifically, for the reasonable potential analysis and WQBEL calculations, the dilution ratio of 180:1 is used with the 6-month median objectives, and the dilution ratio of 79:1 is used with the daily maximum, instantaneous maximum, and 30-day average objectives.

4. Determining the Need for WQBELs

a. Methodology. Ocean Plan Appendix VI sets forth a procedure for reasonable potential analyses. The procedure assumes a lognormal distribution for the effluent data and compares the 95th percentile concentration at 95 percent confidence for each parameter in Ocean Plan Table 1, accounting for dilution, to the applicable water quality objective in Ocean Plan Table 1. The analysis results in one of three endpoints for each pollutant based on four triggers:

- Endpoint 1 – There is reasonable potential. WQBELs and monitoring are required.
- Endpoint 2 – There is no reasonable potential. WQBELs are not required, but monitoring may be required.
- Endpoint 3 – The analysis is inconclusive. Existing WQBELs are retained, and monitoring is required.

The four triggers are as follows:

(1) Trigger 1. If any detected value after adjusted for dilution (X) is greater than the applicable water quality objective (Co) from Table 1, then Endpoint 1 applies.

$$\text{For Table 1 pollutants:} \quad X = (C_e + D_m C_s) / (D_m + 1)$$

$$\text{For acute toxicity:} \quad X = C_e / (0.1 D_m + 1);$$

Where:

Ce is the effluent concentration.

Dm is the minimum initial dilution expressed as parts seawater per part wastewater.

Cs is the background seawater concentration from Ocean Plan Table 3.

- (2) **Trigger 2.** If there are three or more detected values and the number of non-detected (ND) or detected but not quantified (DNQ) values (c) are less than or equal to 80 percent of the total number of data points (n) (i.e., if $c/n \leq 80\%$), a parametric reasonable potential analysis is performed. If the calculated upper confidence bound is greater than Co, then Endpoint 1 is concluded; otherwise Endpoint 2 is concluded.
- (3) **Trigger 3.** If there are fewer than three detected values or if there are more than three detected values but the percentage of non-detected (ND) or detected but not quantified (DNQ) values are more than 80 percent (i.e., $c/n > 80\%$), a non-parametric reasonable potential analysis is performed. Depending on the results, either Endpoint 2 or Endpoint 3 is concluded.
- (4) **Trigger 4.** If any other information about the receiving water or the discharge supports a finding of reasonable potential, then the reasonable potential analysis may be based on best professional judgment. If data or other information is unavailable or insufficient to determine if a WQBEL is required, Endpoint 3 is concluded. Otherwise, either Endpoint 1 or Endpoint 2 is concluded.
- b. **Effluent Data.** The reasonable potential analysis is based on effluent monitoring data collected from October 2012 through December 2016 at Discharge Point No. 001.
- c. **Background Data.** In accordance with Ocean Plan section III.C.4.a, background concentrations for all pollutants are assumed to equal zero, except for those listed in Ocean Plan Table 3.
- d. **Results for Ocean Plan Table 1 Pollutants.** The following table presents results of the reasonable potential analysis performed in accordance with Ocean Plan procedures. The endpoint for each Table 1 pollutant is identified. The analysis shows reasonable potential for total chlorine residual, acute toxicity, and chronic toxicity.

Table F-7. Reasonable Potential Analysis

Table 1 Pollutant	Water Quality Objective (µg/L) ^[1a,c,d]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After Mixing (µg/L) ^[1c,d]	Projected 95 th percentile (µg/L) ^[1b]	RPA Result/Comment ^[2]
Objectives for Protection of Marine Aquatic Life							
Arsenic	8/32/80	5	0	1.6	2.99/2.98/2.98	3.0/3.0/3.0	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Cadmium	1/4/10	5	2	0.087	<0.0001/<0.0003 /<0.0003	--	Endpoint 3 –Inconclusive
Chromium (VI)	2/8/20	5	5	<0.05	<0.0003/<0.0006 /<0.0006	--	Endpoint 3 –Inconclusive

Table 1 Pollutant	Water Quality Objective (µg/L) ^[1a,c,d]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After Mixing (µg/L) ^[1c,d]	Projected 95 th percentile (µg/L) ^[1b]	RPA Result/Comment ^[2]
Copper	3/12/30	5	0	11	2.05/2.11/2.11	2.07/2.15/2.15	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Lead	2/8/20	5	0	0.2	<0.0014/<0.0031 /<0.0031	--	Endpoint 3 –Inconclusive
Mercury	0.04/0.16/0.4	5	2	0.044	0.0007/0.001/0.001	--	Endpoint 3 –Inconclusive
Nickel	5/20/50	5	0	5.7	0.032/0.071/0.071	0.15/0.33/0.33	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Selenium	15/60/150	5	0	1.2	0.0066/0.015/0.015	--	Endpoint 3 –Inconclusive
Silver	0.7/2.8/7	5	4	0.023	<0.16/<0.16/<0.16	--	Endpoint 3 –Inconclusive
Zinc	20/80/200	5	0	36	8.15/8.35/8.35	8.29/8.66/8.66	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Cyanide	1/4/10	5	1	5.7	0.032/0.071/0.071	0.079/0.18/0.18	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Total Chlorine Residual ^[3]	2/8/60	1522	1516	38	0.94/2.13/2.13	--	Endpoint 1 – See Fact Sheet section IV.C.5.a
Ammonia (as N)	600/2400/6000	213	0	46,000	254/575/575	325/736/736	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Acute Toxicity ^[4]	0.3 TUa	17	0	1	0.013	0.019	Endpoint 1 – See Fact Sheet section IV.C.6.a
Chronic Toxicity ^[4]	1 TUC	4	4	<19.2	<0.24	--	Endpoint 1 – See Fact Sheet section IV.C.6.b
Phenolic Compounds (non-chlorinated)	30/120/300	5	5	<7.0	<0.039/<0.09/<0.09	--	Endpoint 3 –Inconclusive
Chlorinated Phenolics	1/4/10	5	5	<4.0	<0.022/<0.05/<0.05	--	Endpoint 3 –Inconclusive
Endosulfan	0.009/0.018 /0.027	5	5	<0.038	<0.0002/<0.0005 /<0.0005	--	Endpoint 3 –Inconclusive
Endrin	0.002/0.004 /0.006	5	5	<0.009	<0.0000/<0.0001 /<0.0001	--	Endpoint 3 –Inconclusive
HCH	0.004/0.008 /0.012	5	5	<0.056	<0.0003/<0.0007 /<0.0007	--	Endpoint 3 –Inconclusive
Objectives for Protection of Human Health – Non-Carcinogens							
Acrolein	220	5	5	<2	<0.025	--	Endpoint 3 –Inconclusive
Antimony	1200	5	0	0.38	<0.0063	--	Endpoint 3 –Inconclusive
Bis (2-Chloroethoxy) Methane	4.4	5	5	<0.81	<0.0101	--	Endpoint 3 –Inconclusive
Bis (2-Chloroisopropyl) Ether	1200	5	5	<0.41	<0.0051	--	Endpoint 3 –Inconclusive
Chlorobenzene	570	5	5	<0.3	<0.0038	--	Endpoint 3 –Inconclusive
Chromium (III)	190000	5	5	<3.0	<0.0375	--	Endpoint 3 –Inconclusive
Di-n-Butyl Phthalate	3500	5	5	<0.91	<0.0114	--	Endpoint 3 –Inconclusive
Dichlorobenzenes	5100	5	5	<1	<0.013	--	Endpoint 3 –Inconclusive
Diethyl Phthalate	33000	5	5	<0.86	<0.011	--	Endpoint 3 –Inconclusive
Dimethyl Phthalate	820000	5	5	<0.68	<0.0085	--	Endpoint 3 –Inconclusive
2-Methyl-4,6-Dinitrophenol	220	5	5	<0.75	<0.0094	--	Endpoint 3 –Inconclusive
2,4-Dinitrophenol	4	5	5	<1.3	<0.016	--	Endpoint 3 –Inconclusive
Ethylbenzene	4100	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
Fluoranthene	15	5	5	<0.76	<0.0095	--	Endpoint 3 –Inconclusive
Hexachloro-cyclopentadiene	58	9	9	<0.09	<0.0011	--	Endpoint 3 –Inconclusive
Nitrobenzene	4.9	5	5	<0.74	<0.0092	--	Endpoint 3 –Inconclusive

Table 1 Pollutant	Water Quality Objective (µg/L) ^[1a,c,d]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After Mixing (µg/L) ^[1c,d]	Projected 95 th percentile (µg/L) ^[1b]	RPA Result/Comment ^[2]
Thallium	2	5	4	0.084	<0.0003	--	Endpoint 3 –Inconclusive
Toluene	85000	5	0	1.2	0.015	0.061	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
Tributyltin	0.0014	5	5	<0.014	<0.0018	--	Endpoint 3 –Inconclusive
1,1,1-Trichloroethane	540000	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
Objectives for Protection of Human Health – Carcinogens							
Acrylonitrile	0.1	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
Aldrin	0.000022	5	5	<0.009	<0.0001	--	Endpoint 3 –Inconclusive
Benzene	5.9	5	5	<0.3	<0.0038	--	Endpoint 3 –Inconclusive
Benzidine	0.000069	4	4	<3.4	<0.043	--	Endpoint 3 –Inconclusive
Beryllium	0.033	5	4	0.051	<0.0003	--	Endpoint 3 –Inconclusive
Bis (2-Chloroethyl) Ether	0.045	5	5	<0.14	<0.0018	--	Endpoint 3 –Inconclusive
Bis (2-Ethylhexyl) Phthalate	3.5	5	5	<0.83	<0.0104	--	Endpoint 3 –Inconclusive
Carbon Tetrachloride	0.9	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
Chlordane	0.000023	5	5	<0.03	<0.0004	--	Endpoint 3 –Inconclusive
Chlorodibromomethane	8.6	5	4	0.09	<0.005	--	Endpoint 3 –Inconclusive
Chloroform	130	5	1	2.8	0.035	0.10	Endpoint 2 – No Reasonable Potential, 95 th percentile less than respective water quality objective
DDT	0.00017	5	5	<0.074	<0.0009	--	Endpoint 3 –Inconclusive
1,4-Dichlorobenzene	18	5	5	<0.3	<0.0038	--	Endpoint 3 –Inconclusive
3,3'-Dichlorobenzidine	0.0081	4	4	<2.0	<0.025	--	Endpoint 3 –Inconclusive
1,2-Dichloroethane	28	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
1,1-Dichloroethylene	0.9	5	5	<0.3	<0.0038	--	Endpoint 3 –Inconclusive
Dichlorobromomethane	6.2	5	4	0.25	<0.005	--	Endpoint 3 –Inconclusive
Dichloromethane	450	5	5	<0.5	<0.0063	--	Endpoint 3 –Inconclusive
1,3-Dichloropropene	8.9	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
Dieldrin	0.00004	5	5	<0.007	<0.0001	--	Endpoint 3 –Inconclusive
2,4-Dinitrotoluene	2.6	5	5	<0.68	<0.0085	--	Endpoint 3 –Inconclusive
1,2-Diphenylhydrazine	0.16	5	5	<0.33	<0.0041	--	Endpoint 3 –Inconclusive
Halomethanes	130	5	5	<1.2	<0.015	--	Endpoint 3 –Inconclusive
Heptachlor	0.00005	5	5	<0.007	<0.0001	--	Endpoint 3 –Inconclusive
Heptachlor Epoxide	0.00002	5	5	<0.02	<0.0003	--	Endpoint 3 –Inconclusive
Hexachlorobenzene	0.00021	5	5	<0.89	<0.011	--	Endpoint 3 –Inconclusive
Hexachlorobutadiene	14	5	5	<0.84	<0.011	--	Endpoint 3 –Inconclusive
Hexachloroethane	2.5	5	5	<0.58	<0.0072	--	Endpoint 3 –Inconclusive
Isophorone	730	5	5	<0.81	<0.010	--	Endpoint 3 –Inconclusive
N-Nitrosodimethylamine	7.3	5	5	<1.1	<0.014	--	Endpoint 3 –Inconclusive
N-Nitrosodi-n-Propylamine	0.38	5	5	<0.85	<0.011	--	Endpoint 3 –Inconclusive
N-Nitrosodiphenylamine	2.5	5	5	<0.9	<0.011	--	Endpoint 3 –Inconclusive
PAHs	0.0088	5	5	<120	<1.5	--	Endpoint 3 –Inconclusive
PCBs	0.000019	5	5	<0.56	<0.007	--	Endpoint 3 –Inconclusive
TCDD equivalents	3.9E-09	5	1	<MLs ^[5]	<MLs ^[5]	--	Endpoint 3 –Inconclusive

Table 1 Pollutant	Water Quality Objective (µg/L) ^[1a,c,d]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After Mixing (µg/L) ^[1c,d]	Projected 95 th percentile (µg/L) ^[1b]	RPA Result/Comment ^[2]
1,1,2,2-Tetrachloroethane	2.3	5	5	<0.3	<0.0038	--	Endpoint 3 –Inconclusive
Tetrachloroethylene	2	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
Toxaphene	0.00021	5	5	<0.3	<0.0038	--	Endpoint 3 –Inconclusive
Trichloroethylene	27	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
1,1,2-Trichloroethane	9.4	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive
2,4,6-Trichlorophenol	0.29	5	5	<0.74	<0.0092	--	Endpoint 3 –Inconclusive
Vinyl Chloride	36	5	5	<0.4	<0.005	--	Endpoint 3 –Inconclusive

Footnotes:

- ^[1] a. For marine aquatic life protection, the maximum expected concentration after mixing for 6-month median, daily maximum, and instantaneous maximum are separated by “/” and expressed as 6-month median/daily maximum/instantaneous maximum. The dilution ratio of 180:1 is used with 6-month median objectives; the dilution ratio of 79:1 is used with daily maximum and instantaneous maximum objectives.
- b. For marine aquatic life protection, the projected 95th percentiles, as described above, are expressed as 6-month median/daily maximum/instantaneous maximum. The dilution ratio of 180:1 is used with 6-month median objectives; the dilution ratio of 79:1 is used with daily maximum and instantaneous maximum objectives.
- c. For marine aquatic life protection, acute and chronic toxicity water quality objectives are daily maxima. The maximum expected acute or chronic toxicity after mixing are calculated using the dilution ratio of 79:1.
- d. For human health protection, the water quality objectives are 30-day averages. The maximum expected concentration after mixing is calculated using the dilution ratio of 79:1.
- ^[2] For values reported as 0 mg/L with no reported MDL, the MDL was estimated as the lowest detected value for the RPA. Several steps of the RPA process require log transformation of the reported data, and inclusion of these data as 0 mg/L would increase the likelihood of a skewed RPA result.
- ^[3] The Regional Water Board finds reasonable potential for this discharge to contribute to an excursion from total chlorine residual water quality objective because the Discharger uses chlorine to disinfect treated wastewater prior to discharging to the Pacific Ocean.
- ^[4] The Regional Water Board finds reasonable potential for this discharge to contribute to an excursion from acute and chronic toxicity water quality objectives based on the sensitivity of the receiving water (Monterey Bay National Marine Sanctuary). The specific beneficial uses of the receiving water that this objective is intended to protect include, but are not limited to, protection of rare and endangered species, preservation of critical marine habitat, and use of fish spawning and fish migration, all of which are uses intrinsic to the Sanctuary.
- ^[5] TCDD Equivalents is the sum of the chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,4,8-CDFs) multiplied by their respective toxicity equivalency factors listed in Ocean Plan Appendix I. Although some congeners were detected above the Reporting Limits (RLs) of the analytical methods, they were all below the Minimum Levels (MLs) stated in the Ocean Plan. Therefore, the TCDD equivalents are treated as Detected but not Quantified, or DNQs, and the RPA is inconclusive.

1. Results for Bacteria

The Ocean Plan establishes minimum protective bacteriological standards for coastal waters adjacent to public beaches and for water contact recreation areas in ocean waters. Bacteriological effluent limits are necessary to meet Ocean Plan standards because of the nature of the discharge. Enterococcus limits were chosen because it is a better bacteriological indicator for human health risk from recreational uses in salt water than fecal or total coliform are. Total coliform WQBELs are unnecessary to protect shellfish harvesting because there are no commercial shellfish beds or evidence of shellfish harvesting for human consumption within the vicinity of the discharge.

2. Recycled Water Project

To ensure water recycling operations will not cause or contribute to an exceedance of a water quality standard, a second reasonable potential analysis was conducted. The second

RPA assumed minimal treatment plant flow (1.18 mgd), peak recycled water demand (0.8 mgd) with 48 percent of recycled water treated by the reverse osmosis unit, and a reverse osmosis concentration factor of 6.7. As shown below, this would cause an estimated 70% increase in pollutant concentrations in the treatment plant’s final effluent:

Maximum Estimated Concentration =

$$\frac{Q_{\text{eff}} \text{ (mgd)} \times 1.0 \text{ (effluent conc.)} + Q_{\text{RO Conc}} \text{ (mgd)} \times 6.7 \text{ (conc. factor)}}{Q_{\text{eff}} \text{ (mgd)} + Q_{\text{RO Conc}} \text{ (mgd)}}$$

Where: $Q_{\text{eff}} = 1.18 \text{ mgd (} Q_{\text{min}}) - 0.8 \text{ mgd (} Q_{\text{peak recycled}}) = 0.38 \text{ mgd}$

$Q_{\text{RO Conc}} = 0.8 \text{ (} Q_{\text{peak recycled}}) \times 0.48 \text{ (% RO)} \times 0.15 \text{ (% rejected)} = 0.057 \text{ mgd}$

Maximum Estimated Concentration =

$$\frac{0.38 \text{ mgd} \times 1.0 \text{ (effluent conc.)} + 0.057 \text{ mgd} \times 6.7 \text{ (conc. factor)}}{0.38 \text{ mgd} + 0.057 \text{ mgd}} = 1.7 = 70\% \text{ increase}$$

This did not change the results of the reasonable potential analysis shown in Fact Sheet Table F-7. Therefore, this Order does not include additional effluent limits once the recycled water project becomes operational. In addition, Provisions VI.C.5.a.iv requires the Discharger to conduct an updated reasonable potential analysis for the water quality objectives listed in Fact Sheet Table F-7 before the recycled water project commences.

5. WQBEL Calculations

In accordance with Ocean Plan section III.C, effluent limitations for Table 1 pollutants that show reasonable potential are calculated using the following equation:

$$C_e = C_o + D_m (C_o - C_s)$$

Where:

C_e = effluent limitation ($\mu\text{g/L}$)

C_o = concentration to be met following initial dilution (the WQO) ($\mu\text{g/L}$).

C_s = background seawater concentration ($\mu\text{g/L}$)

D_m = minimum initial dilution expressed as parts seawater per part wastewater (180:1 for 6-month medians; 79:1 for daily or instantaneous maxima)

Ocean Plan Table 3 provides background concentrations for five metals. Except for these five metals, background concentrations are assumed to be zero ($C_s = 0$) in accordance with Ocean Plan section III.C.4.a.

a. Total Chlorine Residual. The total chlorine residual WQBELs are based on the following Ocean Plan water quality objectives:

Pollutant	Units	6-month Median	Daily Maximum	Instantaneous Maximum
Total Chlorine Residual	$\mu\text{g/L}$	2	8	60

Using the equation, $C_e = C_o + D_m (C_o - C_s)$, the WQBELs are calculated as follows:

$$\text{6-month median WQBEL: } C_e = 2 + 180 (2 - 0) = 360 \mu\text{g/L (0.36 mg/L)}$$

$$\text{Daily maximum WQBEL: } C_e = 8 + 79 (8 - 0) = 640 \mu\text{g/L (0.64 mg/L)}$$

$$\text{Instantaneous maximum WQBEL: } C_e = 60 + 79 (60 - 0) = 4800 \mu\text{g/L (4.8 mg/L)}$$

The Ocean Plan also requires mass emission limitations using the equation, mass emission WQBEL (kg/day) = $3.78 \times C_e \times Q$, with C_e in mg/L and Q (flow) in MGD. Using a dry weather capacity of 4.0 MGD and a conversion factor of 3.78, the mass emission limitations are calculated as follows:

$$\text{6-month median mass emission WQBEL: } 0.36 \text{ mg/L} \times 4 \text{ MGD} \times 3.78 = 5.4 \text{ kg/day}$$

$$\text{Daily maximum mass emission WQBEL: } 0.64 \text{ mg/L} \times 4 \text{ MGD} \times 3.78 = 9.7 \text{ kg/day}$$

- b. Bacteria.** The enterococcus bacteria WQBELs are based on the Ocean Plan water quality objectives, specifically the 30-day geometric mean enterococcus density, which is not to exceed 35 most probable number (MPN) per 100 mL, and the single sample maximum enterococcus density, which is not to exceed 104 MPN per 100 mL.

Using the equation, $C_e = C_o + D_m (C_o - C_s)$, the WQBELs are calculated as follows:

$$\text{30-day geometric mean WQBEL: } C_e = 35 + 79 (35 - 0) = 2,800 \text{ MPN/100 mL}$$

$$\text{Single-sample maximum WQBEL: } C_e = 104 + 79 (104 - 0) = 8,300 \text{ MPN/100 mL}$$

6. Acute and Chronic Toxicity

This Order includes acute and chronic toxicity limitations as follows:

- a. Acute Toxicity.** The daily maximum effluent limitation for acute toxicity is based on the Ocean Plan WQO of 0.3 TU_a. Using the equation from Ocean Plan section III.C.4.b, $C_e = C_a + (0.1) D_m (C_a)$, the effluent limit is calculated as follows:

$$\text{Daily maximum } C_e = 0.3 + (0.1) 79 (0.3) = 2.7 \text{ TU}_a$$

- b. Chronic Toxicity.** The daily maximum effluent limitation for chronic toxicity is based on the Ocean Plan WQO of 1 TU_c. Using the equation, $C_e = C_o + D_m (C_o - C_s)$, the effluent limit is calculated as follows:

$$\text{Daily maximum } C_e = 1 + 79 (1 - 0) = 80 \text{ TU}_c$$

D. Discharge Requirement Considerations

- 1. Anti-Backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 122.44(1), which generally require effluent limitations in a reissued permit to be as stringent as those in the previous permit. The requirements of this Order are at least as stringent as those in the previous order.
- 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. This Order does not allow for a flow increase, a reduced level of treatment, or an increase in any effluent limitations relative

to those in the previous order. Although the planned water recycling project, if implemented, would potentially increase the concentration of pollutants in the discharge, the more concentrated discharge would be subject to the same treatment and control processes and would be required to comply with the same effluent limitations and discharge prohibitions as the current discharge regulated by this Order. Accordingly, this Order ensures that any increase in pollutant concentrations as a result of water recycling will not lead to a condition of pollution or nuisance and will maintain the highest water quality consistent with the maximum benefit to the people of the State.

- 3. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and WQBELs for individual pollutants. The technology-based requirements implement minimum, applicable federal technology-based requirements. In addition, this Order contains more stringent effluent limitations as necessary to meet water quality standards. These limitations are no more stringent than required to implement the 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 federal water quality standards. The WQBEL calculations are based on the Ocean Plan, which U.S. EPA approved on February 14, 2006. U.S. EPA also approved subsequent amendments. Most Basin Plan beneficial uses and water quality objectives were approved under State law and submitted to and approved by U.S. EPA 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 implemented by this Order so they are applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

This Order's receiving water limitations are based on Ocean Plan sections II.C, II.D, and II.E, and water quality standards established in accordance with the CWA and regulations adopted thereunder.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. Attachment G contains standard provisions that supplement the federal standard provisions in Attachment D.

This Order omits the federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the State’s enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

B. Monitoring and Reporting Program (MRP) Requirements

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 Monitoring and Reporting Program (Attachment E) of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. For more background regarding these requirements, see Fact Sheet section VII.

Table F-8. Monitoring Requirements Summary

Parameter	Influent INF-001	Effluent EFF-001 (or EFF-001D)	Biosolids BIO-001	Receiving Water
Flow	Continuous	Continuous	--	--
pH	--	1/Day	--	1/Year
Biochemical Oxygen Demand (5-day @ 20°C)	1/Week	1/Week	--	--
Total Suspended Solids	2/Week	2/Week	--	--
Total Chlorine Residual	--	1/Hour	--	--
Oil and Grease	--	1/Quarter	--	--
Temperature	--	--	--	1/Year
Dissolved Oxygen	--	--	--	1/Year
Salinity	--	--	--	1/Year
Standard Observations	--	--	--	1/Year (Attachment G section III.C.1)
Ammonia (Total as N)	--	1/Month	--	1/Year
Enterococcus	--	1/Week	--	1/Year
Acute Toxicity	--	1/Year	--	--
Chronic Toxicity	--	1/Year	--	--
All Other Table 1 Pollutants ^[1]	--	1/Year	--	--
Metric Tons/Year	--	--	See Attachment G section III.B.1	--
Metals ^[2]	--	--	See Attachment G section III.B.1	--
Paint Filter Test	--	--	See Attachment G section III.B.1	--

Footnotes:

^[1] This monitoring is required by Provision VI.C.2 of the Order.

^[2] The metals are Arsenic, Cadmium, Copper, Mercury, Molybdenum, Nickel, Lead, Selenium, and Zinc.

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 Ocean Plan water quality objectives 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 reasonable potential analysis conclusions of this Order remain valid. This requirement is authorized pursuant to 40 C.F.R. section 122.41(h) and 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. Pollutant Minimization Program

This provision is based on Ocean Plan section III.C.9, Basin Plan section 4.13.2, and Water Code section 13263, which emphasizes that pollution prevention is necessary to achieve a water quality objective. To ensure that pollutants that are toxic to aquatic organisms do not increase to a concentration that could threaten the narrative toxicity objective, a Pollutant Minimization Program is necessary. While this Order requires toxicity tests, these may not capture emerging contaminants that could be toxic to this sensitive receiving water (Monterey Bay National Marine Sanctuary), which includes specific beneficial uses to protect rare and endangered species, preserve critical marine habitat, and use for fish spawning and fish migration.

4. Special Provisions for Publicly-Owned Treatment Works (POTWs)

- a. Sludge and Biosolids Management.** This provision is based on Basin Plan section 4.17. “Sludge” refers to the solid, semisolid, and liquid residue removed during primary, secondary, and advanced wastewater treatment processes. “Biosolids” refers to sludge that has been treated and may be beneficially reused.
- b. Collection System Management.** The Discharger’s collection system is part of the Facility regulated through this Order. This provision requires compliance with State Water Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order No. WQ 2013-0058-EXEC and any subsequent order updating these requirements. These State Water Board WDRs require public agencies that own or operate sanitary sewer systems with one or more miles of sewer lines to enroll for coverage and comply with requirements to develop sanitary sewer management plans and report sanitary sewer overflows, among other provisions and prohibitions. The State Water Board WDRs

contain requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows that are more extensive and, therefore, more stringent than the standard provisions in Attachments D and G. Compliance with the State Water Board WDRs will satisfy the corresponding requirements in Attachments D and G.

- c. **Anaerobically-Digestible Material.** Standard Operating Procedures are required for dischargers that accept hauled waste food, fats, oil, and grease for injection into anaerobic digesters. The development and implementation of Standard Operating Procedures for management of these materials is intended to allow the California Department of Resources Recycling and Recovery to exempt operations from separate and redundant permitting programs. If the Discharger does not accept fats, oil, and grease for resource recovery purposes, it is not required to develop and implement Standard Operating Procedures.

Some POTWs choose to accept organic material, such as waste food, fats, oils, and grease, into their anaerobic digesters to increase production of methane and other biogases for energy production and to prevent such materials from being discharged into the collection system and potentially causing sanitary sewer overflows. The California Department of Resources Recycling and Recovery has proposed to exclude POTWs from Process Facility/Transfer Station permit requirements when the same activities are regulated under WDRs or NPDES permits. The proposed exclusion is restricted to anaerobically-digestible materials that have been prescreened, slurried, processed, and conveyed in a closed system for co-digestion with regular sewage sludge. The exclusion is based on the facility developing Standard Operating Procedures for proper handling, processing, tracking, and management.

5. Recycled Water Project

Provision VI.C.5.a specifies conditions the Discharger must comply with before and after it begins operations of the Recycled Water Project. To ensure the Discharger will be able to collect representative samples, this provision requires documentation that there will be complete mixing of treated wastewater and reverse osmosis concentrate prior to Monitoring Location EFF-001.

By reducing effluent flows, the Recycled Water Project may increase the toxicity of the discharge and concentration of pollutants. To evaluate whether there is reasonable potential for an exceedance of water quality objectives, Provision VI.C.5.a requires the Discharger to conduct acute and chronic toxicity tests under worst-case conditions (maximum amount of reverse osmosis concentrate relative to treated wastewater) and to monitor reverse osmosis concentrate for pollutants listed in Ocean Plan Table 1.

Finally, because the Recycled Water Project will reduce effluent flows and increase the salinity of the discharge, which will reduce its buoyancy, Provision VI.C.5.b requires the Discharger to update its Dilution Study to reflect such conditions.

VII. RATIONALE FOR MONITORING AND REPORTING PROGRAM (MRP)

The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring, reporting, and recordkeeping requirements that implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP.

A. Influent Monitoring

Influent monitoring at Monitoring Location INF-001 is necessary to understand Facility operations and to evaluate compliance with Prohibition III.D, which prohibits average dry weather influent flow greater than 4 MGD. Influent BOD₅ and TSS monitoring is necessary to evaluate compliance with this Order's 85 percent removal requirement.

B. Effluent Monitoring

Effluent monitoring at Monitoring Location EFF-001 and EFF-001D is necessary to understand Facility operations, to evaluate compliance with this Order's effluent limitations, and to provide data for future reasonable potential analyses.

The MRP no longer requires total coliform monitoring because there is no evidence to indicate the shoreline in the harbor area supports recreational shellfish harvesting. No commercial shellfish beds are in the vicinity of the discharge.

C. Toxicity Monitoring

Toxicity tests are used to evaluate the potential aggregate toxic effect of pollutant mixtures in the effluent on receiving water quality.

- 1. Acute Toxicity.** Ocean Plan Appendix III recommends an acute toxicity monitoring frequency of "at least annually" for wastewater treatment plants that discharge between 0.1 and 10 MGD. The average dry weather design capacity for the Facility is 4 MGD, with an annual average discharge of 1.6 MGD. This Order reduces the monitoring frequency for acute toxicity from quarterly to annually because there were no violations of the acute toxicity effluent limitation during the most recent two previous order terms. Some monitoring remains necessary to provide data for future reasonable potential analyses.

The Discharger performed a Toxicity Identification Evaluation, dated December 2, 2005, that confirmed un-ionized ammonia caused effluent toxicity. Because the concentration and form of ammonia in the effluent would not cause similar toxicity in the receiving water, this Order allows the Discharger to control pH and the formation of un-ionized ammonia during acute toxicity tests.

- 2. Chronic Toxicity.** Ocean Plan section III.C.4.c(4) requires chronic toxicity monitoring to evaluate the capacity of the discharge to cause or contribute to chronic aquatic toxicity in the receiving water. Monitoring is also necessary to determine whether toxicity reduction evaluations are needed and to provide data for future reasonable potential analyses.

D. Receiving Water Monitoring

Receiving water monitoring at Monitoring Locations RSW-001 through RSW-005 is necessary to characterize the receiving water and the effects the discharge could have on it. The MRP no longer requires the Discharger to collect data on fecal coliform and total coliform annually. Instead, annual enterococcus data is to be collected because it is a better bacteriological indicator of human health risk in recreational waters than fecal or total coliform are. This Order retains all other receiving water monitoring requirements from the previous order.

E. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

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.

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 *San Mateo County 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 William Burrell.

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 **October 13, 2017**.

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

Date: **November 8, 2017**
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

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.

E. 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

F. Information and Copying

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

G. 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.

H. Additional Information

Requests for additional information or questions regarding this Order should be directed to William Burrell at (510) 622-2317 or William.Burrell@waterboards.ca.gov.

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

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

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

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

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

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

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

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

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

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

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

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

- b. Maintenance of adequate chemicals or other supplies and spare parts necessary for continued operations of sewerage facilities.
 - c. Provisions of emergency standby power.
 - d. Protection against vandalism.
 - e. Expeditious action to repair failures of, or damage to, equipment and sewer lines.
 - f. Report of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges.
 - g. Programs for maintenance, replacement, and surveillance of physical condition of equipment, facilities, and sewer lines.
2. **Spill Prevention Plan** - The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and minimize the effects of such events. The Spill Prevention Plan shall:
- a. Identify the possible sources of accidental discharge, untreated or partially treated waste bypass, and polluted drainage;
 - b. Evaluate the effectiveness of present facilities and procedures, and state when they became operational; and
 - a. Predict the effectiveness of the proposed facilities and procedures, and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

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

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

- 1. **Operation and Maintenance (O&M) Manual** - The Discharger shall maintain an O&M Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the O&M Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The O&M Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.
- 2. **Wastewater Facilities Status Report** - The Discharger shall regularly review, revise, or update, as necessary, its Wastewater Facilities Status Report. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as

necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.

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

E. Property Rights – Not Supplemented

F. Inspection and Entry – Not Supplemented

G. Bypass – Not Supplemented

H. Upset – Not Supplemented

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

1. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by California Water Code Section 13050.
2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater, except in cases where excluding the public is infeasible, such as private property. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.
3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit continues in force and effect until a new permit is issued or the Regional Water Board rescinds the permit.

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

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

1. Storm Water Pollution Prevention Plan (SWPP Plan)

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

- a. To identify pollutant sources that may affect the quality of storm water discharges; and
- b. To identify, assign, and implement control measures and management practices to reduce pollutants in storm water discharges.

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

2. Source Identification

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

- a. A topographical map (or other acceptable map if a topographical map is unavailable), extending one-quarter mile beyond the property boundaries of the facility, showing the wastewater treatment facility process areas, surface water bodies (including springs and wells), and discharge point(s) where the facility's storm water discharges to a municipal storm drain system or other points of discharge to waters of the State. The requirements of this paragraph may be included in the site map required under the following paragraph if appropriate.
- b. A site map showing the following:
 - 1) Storm water conveyance, drainage, and discharge structures;
 - 2) An outline of the storm water drainage areas for each storm water discharge point;
 - 3) Paved areas and buildings;
 - 4) Areas of actual or potential pollutant contact with storm water or release to storm water, including but not limited to outdoor storage and process areas; material loading, unloading, and access areas; and waste treatment, storage, and disposal areas;
 - 5) Location of existing storm water structural control measures (i.e., berms, coverings, etc.);
 - 6) Surface water locations, including springs and wetlands; and
 - 7) Vehicle service areas.
- c. A narrative description of the following:
 - 1) Wastewater treatment process activity areas;
 - 2) Materials, equipment, and vehicle management practices employed to minimize contact of significant materials of concern with storm water discharges;
 - 3) Material storage, loading, unloading, and access areas;
 - 4) Existing structural and non-structural control measures (if any) to reduce pollutants in storm water discharges; and
 - 5) Methods of on-site storage and disposal of significant materials.
- d. A list of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities.

3. Storm Water Management Controls

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

a. Storm water pollution prevention personnel

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

b. Good housekeeping

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

c. Spill prevention and response

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

d. Source control

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

e. Storm water management practices

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

f. Sediment and erosion control

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

g. Employee training

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

h. Inspections

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

i. Records

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

4. Annual Verification of SWPP Plan

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

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

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

1. Exceptional quality biosolids meet the pollutant concentration limits in Table III of 40 C.F.R. Part 503.13, Class A pathogen limits, and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8). Such biosolids do not have to be tracked further for compliance with general requirements (503.12) and management practices (503.14).
2. Biosolids used for agricultural land, forest, or reclamation shall meet the pollutant limits in Table I (ceiling concentrations) and Table II or Table III (cumulative loadings or pollutant concentration limits) of 503.13. They shall also meet the general requirements (503.12) and management practices (503.14) (if not exceptional quality biosolids) for Class A or Class B pathogen levels with associated access restrictions (503.32) and one of the 10 vector attraction reduction requirements in 503.33(b)(1)-(b)(10).
3. Biosolids used for lawn or home gardens must meet exceptional quality biosolids limits.
3. Biosolids sold or given away in a bag or other container must meet the pollutant limits in either Table III or Table IV (pollutant concentration limits or annual pollutant loading rate limits) of 503.13. If Table IV is used, a label or information sheet must be attached to the biosolids packing that explains Table IV (see 503.14). The biosolids must also meet the Class A pathogen limits and one of the vector attraction reduction requirements in 503.33(b)(1)-(b)(8).

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

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

1. Use of Certified Laboratories

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

2. Use of Appropriate Minimum Levels

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

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

3. Frequency of Monitoring

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

a. Timing of Sample Collection

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

- 4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permit limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.
 - i. The Discharger shall perform bioassay tests on final effluent samples; when chlorine is used for disinfection, bioassay tests shall be performed on effluent after chlorination-dechlorination; and
 - ii. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet the percent survival specified in the permit.
- b. Conditions Triggering Accelerated Monitoring
 - 1) If the results from two consecutive samples of a constituent monitored in a 30-day period exceed the monthly average limit for any parameter (or if the required sampling frequency is once per month and the monthly sample exceeds the monthly average limit), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter is in compliance with the monthly average limit.
 - 2) If any maximum daily limit is exceeded, the Discharger shall increase its sampling frequency to daily within 24 hours after the results are received that indicate the exceedance of the maximum daily limit until two samples collected on consecutive days show compliance with the maximum daily limit.
 - 3) If final or intermediate results of an acute bioassay test indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay test is less than 70 percent), the Discharger shall initiate a new test as soon as practical, and the Discharger shall investigate the cause of the mortalities and report its findings in the next self monitoring report (SMR).
 - 4) The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limit is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring as required by its permit.
 - 5) When a bypass occurs (except one subject to provision III.A.3.b.6 below), the Discharger shall monitor flows and collect samples on a daily basis for all constituents at affected discharge points that have effluent limits for the duration of the bypass (including acute toxicity using static renewals), except chronic toxicity, unless otherwise stipulated by the MRP.
 - 6) Unless otherwise stipulated by the MRP, when a bypass approved pursuant to Attachment D, Standard Provisions, Sections I.G.2 or I.G.4, occurs, the Discharger shall monitor flows and, using appropriate procedures as specified in the MRP, collect and retain samples for affected

discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze for total suspended solids (TSS) using 24-hour composites (or more frequent increments) and for bacteria indicators with effluent limits using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze the retained samples for that discharge for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass discharge event for all other constituents that have effluent limits, except oil and grease, mercury, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

c. Storm Water Monitoring

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

- 1) Conduct visual observations of the storm water discharge locations during daylight hours at least once per month during a storm event that produces significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor, etc.
- 2) Measure (or estimate) the total volume of storm water discharge, collect grab samples of storm water discharge from at least two storm events that produce significant storm water discharge, and analyze the samples for oil and grease, pH, TSS, and specific conductance.

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

- 3) Testing for the presence of non-storm water discharges shall be conducted no less than twice during the dry season (May 1 to September 30) at all storm water discharge locations. Tests may include visual observations of flows, stains, sludges, odors, and other abnormal conditions; dye tests; TV line surveys; or analysis and validation of accurate piping schematics. Records shall be maintained describing the method used, date of testing, locations observed, and test results.
- 4) Samples shall be collected from all locations where storm water is discharged. Samples shall represent the quality and quantity of storm water discharged from the facility. If a facility discharges storm water at multiple locations, the Discharger may sample a reduced number of locations if it establishes and documents through the monitoring program that storm water discharges from different locations are substantially identical.
- 5) Records of all storm water monitoring information and copies of all reports required by the permit shall be retained for a period of at least three years from the date of sample, observation, or report.

d. Receiving Water Monitoring

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

- 1) Receiving water samples shall be collected on days coincident with effluent sampling for conventional pollutants.
- 2) Receiving water samples shall be collected at each station on each sampling day during the period within one hour following low slack water. Where sampling during lower slack water is impractical, sampling shall be performed during higher slack water. Samples shall be collected within the discharge plume and down current of the discharge point so as to be representative, unless otherwise stipulated in the MRP.
- 3) Samples shall be collected within one foot of the surface of the receiving water, unless otherwise stipulated in the MRP.

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

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

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

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

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

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

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

1. Receiving Water Observations

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

- a. *Floating and suspended materials* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence, source, and size of affected area.
- b. *Discoloration and turbidity*: description of color, source, and size of affected area.
- c. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.
- d. *Beneficial water use*: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of each sampling station.
- e. *Hydrographic condition*: time and height of corrected high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time of sample collection).
- f. *Weather conditions*:
 - 1) Air temperature; and
 - 2) Total precipitation during the five days prior to observation.

2. Wastewater Effluent Observations

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

- a. *Floating and suspended material of wastewater origin* (e.g., oil, grease, algae, and other macroscopic particulate matter): presence or absence.
- b. *Odor*: presence or absence, characterization, source, distance of travel, and wind direction.

3. Beach and Shoreline Observations

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

- a. *Material of wastewater origin*: presence or absence, description of material, estimated size of affected area, and source.
- b. *Beneficial use*: estimate number of people participating in recreational water contact, non-water contact, or fishing activities.

4. Land Retention or Disposal Area Observations

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

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

- b. Report evidence of leaching liquid from area of confinement and estimated size of affected area. Show affected area on a sketch and volume of flow (e.g., gallons per minute [gpm]).
- c. Regarding odor, describe presence or absence, characterization, source, distance of travel, and wind direction.
- d. Estimate number of waterfowl and other water-associated birds in the disposal area and vicinity.

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

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

- a. *Odor*: presence or absence, characterization, source, and distance of travel.
- b. *Weather conditions*: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

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

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

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

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

1. Analytical Information

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

2. Flow Monitoring Data

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

- a. Total volume for each day; and
- b. Maximum, minimum, and average daily flows for each calendar month.

3. Wastewater Treatment Process Solids

- a. For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:
 - 1) Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and
 - 2) Final disposition of such solids (e.g., landfill, other subsequent treatment unit).
- b. For final dewatered biosolids from the treatment plant as a whole, records shall include the following:
 - 1) Total volume or mass of dewatered biosolids for each calendar month;
 - 2) Solids content of the dewatered biosolids; and
 - 3) Final disposition of dewatered biosolids (disposal location and disposal method).

4. Disinfection Process

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

- a. For bacteriological analyses:
 - 1) Wastewater flow rate at the time of sample collection; and
 - 2) Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in this Order).
- b. For the chlorination process, when chlorine is used for disinfection, at least daily average values for the following:
 - 1) Chlorine residual of treated wastewater as it enters the contact basin (mg/L);
 - 2) Chlorine dosage (kg/day); and
 - 3) Dechlorination chemical dosage (kg/day).

5. Treatment Process Bypasses

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

- a. Identification of the treatment process bypassed;
- b. Dates and times of bypass beginning and end;

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

6. Treatment Facility Overflows

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

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

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

1. Self Monitoring Reports

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

a. Transmittal letter

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

- 1) Identification of all violations of effluent limits or other waste discharge requirements found during the reporting period;
- 2) Details regarding violations: parameters, magnitude, test results, frequency, and dates;
- 3) Causes of violations;
- 4) Discussion of corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedule of action implementation (if previous reports have been submitted that address corrective actions, reference to the earlier reports is satisfactory);
- 5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement

suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

- 6) If the Discharger blends, the letter shall describe the duration of blending events and certify whether blended effluent was in compliance with the conditions for blending; and
- 7) Signature (The transmittal letter shall be signed according to Section V.B of this Order, Attachment D – Standard Provisions.).

b. Compliance evaluation summary

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

c. Results of analyses and observations

- 1) Tabulations of all required analyses and observations, including parameter, date, time, sample station, type of sample, test result, method detection limit, method minimum level, and method reporting level, if applicable, signed by the laboratory director or other responsible official.
- 2) When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of detected but not quantified (DNQ) or nondetect (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - ii. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

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

- 3) Dioxin-TEQ Reporting: The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the quantifiable limit (reporting level), the

method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (ML) to zero. The Discharger shall calculate and report dioxin-TEQs using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

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

where: C_x = measured or estimated concentration of congener x
 TEF_x = toxicity equivalency factor for congener x
 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)	1998 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0001	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.05	0.2
2,3,4,7,8-PeCDF	50	0.5	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0001	0.02

d. Data reporting for results not yet available

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

circumstances in the SMR and include the data for these parameters and relevant discussions of any observed exceedances in the next SMR due after the results are available.

e. Flow data

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

f. Annual self monitoring report requirements

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

- 1) Annual compliance summary table of treatment plant performance, including documentation of any blending events;
- 2) Comprehensive discussion of treatment plant performance and compliance with the permit (This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve performance and reliability of the Discharger's wastewater collection, treatment, or disposal practices.);
- 3) Both tabular and graphical summaries of the monitoring data for the previous year if parameters are monitored at a frequency of monthly or greater;
- 4) List of approved analyses, including the following:
 - (i) List of analyses for which the Discharger is certified;
 - (ii) List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory shall not be submitted but be retained onsite); and
 - (iii) List of "waived" analyses, as approved;
- 5) Plan view drawing or map showing the Discharger's facility, flow routing, and sampling and observation station locations;
- 6) Results of annual facility inspection to verify that all elements of the SWPP Plan are accurate and up to date (only required if the Discharger does not route all storm water to the headworks of its wastewater treatment plant); and
- 7) Results of facility report reviews (The Discharger shall regularly review, revise, and update, as necessary, the O&M Manual, the Contingency Plan, the Spill Prevention Plan, and Wastewater Facilities Status Report so that these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall include, in each Annual Report, a description or summary of review and evaluation procedures, recommended or planned actions, and an estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure they are up-to-date.).

g. Report submittal

The Discharger shall submit SMRs to:

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

h. Reporting data in electronic format

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

- 1) *Reporting Method*: The Discharger shall submit SMRs electronically via a process approved by the Executive Officer (see, for example, the letter dated December 17, 1999, "Official Implementation of Electronic Reporting System [ERS]" and the progress report letter dated December 17, 2000).
- 2) *Monthly or Quarterly Reporting Requirements*: For each reporting period (monthly or quarterly as specified in the MRP), the Discharger shall submit an electronic SMR to the Regional Water Board in accordance with the provisions of Section V.C.1.a-e, except for requirements under Section V.C.1.c(1) where ERS does not have fields for dischargers to input certain information (e.g., sample time). However, until U.S. EPA approves the electronic signature or other signature technologies, Dischargers that use ERS shall submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, and a violation report (a receipt of the electronic transmittal shall be retained by the Discharger). This electronic SMR submittal suffices for the signed tabulations specified under Section V.C.1.c(1).
- 3) *Annual Reporting Requirements*: Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting the portion of the annual report required under Section V.C.1.f(1) and (3).

D. Compliance Schedules – Not supplemented

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

1. Spill of Oil or Other Hazardous Material Reports

- a. Within 24 hours of becoming aware of a spill of oil or other hazardous material that is not contained onsite and completely cleaned up, the Discharger shall report by telephone to the Regional Water Board at (510) 622-2369.
- b. The Discharger shall also report such spills to the State Office of Emergency Services [telephone (800) 852-7550] only when the spills are in accordance with applicable reporting quantities for hazardous materials.

- c. The Discharger shall submit a written report to the Regional Water Board within five working days following telephone notification unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:
- 1) Date and time of spill, and duration if known;
 - 2) Location of spill (street address or description of location);
 - 3) Nature of material spilled;
 - 4) Quantity of material involved;
 - 5) Receiving water body affected, if any;
 - 6) Cause of spill;
 - 7) Estimated size of affected area;
 - 8) Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);
 - 9) Corrective actions taken to contain, minimize, or clean up the spill;
 - 10) Future corrective actions planned to be taken to prevent recurrence, and schedule of implementation; and
 - 11) Persons or agencies notified.

2. Unauthorized Discharges from Municipal Wastewater Treatment Plants¹

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

a. Two (2)-Hour Notification

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

- 1) Incident description and cause;

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

- 2) Location of threatened or involved waterway(s) or storm drains;
- 3) Date and time the unauthorized discharge started;
- 4) Estimated quantity and duration of the unauthorized discharge (to the extent known), and the estimated amount recovered;
- 5) Level of treatment prior to discharge (e.g., raw wastewater, primary treated, undisinfected secondary treated, and so on); and
- 6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

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

c. 5-Day Written Report

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

- 1) Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;
- 2) Efforts implemented to minimize public exposure to the unauthorized discharge;
- 3) Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of water) and the extent of sampling if conducted;
- 4) Corrective measures taken to minimize the impact of the unauthorized discharge;
- 5) Measures to be taken to minimize the chances of a similar unauthorized discharge occurring in the future;
- 6) Summary of Spill Prevention Plan or O&M Manual modifications to be made, if necessary, to minimize the chances of future unauthorized discharges; and
- 7) Quantity and duration of the unauthorized discharge, and the amount recovered.

d. Communication Protocol

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

Table B
Summary of Communication Requirements for Unauthorized Discharges¹ from
Municipal Wastewater Treatment Plants

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

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

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

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

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

F. Planned Changes – Not supplemented

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VI. STANDARD PROVISION – ENFORCEMENT – Not Supplemented

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

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

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

1. Arithmetic Calculations

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

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

or

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

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

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

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

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

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

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

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_t” is the total flow rate of the combined waste streams.

- c. Maximum allowable mass emission rate, whether for a 24-hour, weekly 7-day, monthly 30-day, or 6-month period, is a limitation expressed as a daily rate determined with the formulas in the paragraph above, using the effluent concentration limit specified in the permit for the period and the specified allowable flow.
- d. POTW removal efficiency is the ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

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

2. Biosolids means the solids, semi-liquid suspensions of solids, residues, screenings, grit, scum, and precipitates separated from or created in wastewater by the unit processes of a treatment system. It also includes, but is not limited to, all supernatant, filtrate, centrate, decantate, and thickener overflow and underflow in the solids handling parts of the wastewater treatment system.
3. Blending is the practice of recombining wastewater that has been biologically treated with wastewater that has bypassed around biological treatment units.
4. Bottom sediment sample is (1) a separate grab sample taken at each sampling station for the determination of selected physical-chemical parameters, or (2) four grab samples collected from different locations in the immediate vicinity of a sampling station while the boat is anchored and analyzed separately for macroinvertebrates.
5. Composite sample is a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow rate of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative sampling protocol for the given parameter subject to Executive Officer approval.
6. Depth-integrated sample is defined as a water or waste sample collected by allowing a sampling device to fill during a vertical traverse in the waste or receiving water body being sampled. The Discharger shall

collect depth-integrated samples in such a manner that the collected sample will be representative of the waste or water body at that sampling point.

7. Flow sample is an accurate measurement of the average daily flow volume using a properly calibrated and maintained flow measuring device.
8. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the wastewater is collected.
9. Initial dilution is the process that results in the rapid and irreversible turbulent mixing of wastewater with receiving water around the point of discharge.
10. Overflow is the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a transport system (e.g., through manholes, at pump stations, and at collection points) upstream from the treatment plant headworks or from any part of a treatment plant facility.
11. Priority pollutants are those constituents referred to in 40 C.F.R. Part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule, the presence or discharge of which could reasonably be expected to interfere with maintaining designated uses.
12. Storm water means storm water runoff, snow melt runoff, and surface runoff and drainage. It excludes infiltration and runoff from agricultural land.
13. Toxic pollutant means any pollutant listed as toxic under federal Clean Water Act section 307(a)(1) or under 40 C.F.R. 401.15.
14. Untreated waste is raw wastewater.
15. Waste, waste discharge, discharge of waste, and discharge are used interchangeably in the permit. The requirements of the permit apply to the entire volume of water, and the material therein, that is disposed of to surface and ground waters of the State of California.

Table C
List of Monitoring Parameters and Analytical Methods

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

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

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

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

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

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

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

CTR No.	Pollutant/Parameter	Analytical Method ⁵	Minimum Levels ⁶ (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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										
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 Benzofluoranthene	610 HPLC		10	10									
63.	Benzo(ghi)Perylene	610 HPLC		5	0.1									
64.	Benzo(k)Fluoranthene	610 HPLC		10	2									

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

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

CTR No.	Pollutant/Parameter	Analytical Method ⁵	Minimum Levels ⁶ (µg/l)											
			GC	GCMS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGFAA	HYD RIDE	CVAA	DCP
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											

Appendix B

Comments

Will Burrell,

We appreciate the opportunity to provide comments on the Sewer Authority Mid-Coastside (SAM) Tentative Order for reissuance of NPDES Permit No. CA0038598. We request the following two clarifications be added in the Permit.

1) **MRP Section V.A Whole Effluent Acute Toxicity (page E-5).** We request that the language shown in underline below be added to acknowledge and clarify that past TIE studies have documented that unionized ammonia in the effluent was the cause of toxicity and that SAM was previously granted approval to control unionized ammonia formation with pH control. This is the same language that was in the previous permit.

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

5. The Discharger has performed a Toxicity Identification Evaluation (TIE) on the effluent confirming that unionized ammonia was responsible for past observed toxicity, and that the concentration and form of ammonia in the effluent do not cause similar toxicity in the receiving water. The Discharger is therefore granted approval to control unionized ammonia formation in effluent samples by pH control prior to acute toxicity testing.

2) **Provision C.3.b Pollutant Minimization Program (page 8).** SAM is not currently required to have a Pollutant Minimization Program (PMP) or submit Annual Reports (PMP) by February 28th each year since there are no pollutants of concern identified. The reissued permit includes a requirement to implement a PMP and submit Annual Reports. This new permit requirement will not become effective until the effective date of the permit after the permit is adopted (November 2017). Therefore the first calendar year SAM will be implementing a formal PMP is 2018. Therefore we request the first PMP report be due February 28, 2019.

b. The Discharger shall submit an annual report on February 28, 2019, and each year following no later than February 28 ~~each year~~. Each annual report shall include at least the following information:

With regard to the 50% dilution series, Dr. Scott Ogle from Pacific Eco Risk had the following comments,

"The Reg'l Brd is concerned that by testing at only the lower concentrations, the species screening will miss toxicity that would otherwise have occurred at a slightly higher concentration. By adding the 50% concentration, they're hoping to catch a species response at the higher concentration that would have

indicated greater specie sensitivity that they would otherwise have missed by testing only at the lower concentrations. It's a valid rationale.”

If you have any questions or need additional information please contact me.
Sincerely,

Tim Costello
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Appendix C
Reply to Comments

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

RESPONSE TO WRITTEN COMMENTS

on the Tentative Order for
Sewer Authority Mid-Coastside, Wastewater Treatment Plant
and Intertie Pipeline System, Half Moon Bay, San Mateo County

On October 10, 2017, the Regional Water Board received written comments from Sewer Authority Mid-Coastside on a tentative order distributed on September 13, 2017, 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.

Sewer Authority Mid-Coastside (SAM)

SAM Comment 1: MRP Section V.A Whole Effluent Acute Toxicity. *SAM requests that we revise the tentative order to acknowledge and clarify that past Toxicity Identification Evaluation studies have documented that un-ionized ammonia in the effluent was the cause of toxicity and that it is appropriate for SAM to control pH during acute toxicity tests.*

Response: We agree and revised Fact Sheet section VII.C.1 as follows:

1. **Acute Toxicity.** Ocean Plan Appendix III recommends an acute toxicity monitoring frequency of “at least annually” for wastewater treatment plants that discharge between 0.1 and 10 MGD. The average dry weather design capacity for the Facility is 4 MGD, with an annual average discharge of 1.6 MGD. This Order reduces the monitoring frequency for acute toxicity from quarterly to annually because there were no violations of the acute toxicity effluent limitation during the most recent two previous order terms. Some monitoring remains necessary to provide data for future reasonable potential analyses.

The Discharger performed a Toxicity Identification Evaluation, dated December 2, 2005, that confirmed un-ionized ammonia caused effluent toxicity. Because the concentration and form of ammonia in the effluent would not cause similar toxicity in the receiving water, this Order allows the Discharger to control pH and the formation of un-ionized ammonia during acute toxicity tests.

SAM Comment 2: Provision C.3.b Pollutant Minimization Program. *SAM points out that it is not currently required to have a Pollutant Minimization Program (PMP) or submit Annual Reports by February 28 of each year. Since 2018 will be the first year that SAM will implement a PMP, it requests that we revise the tentative order to clarify that the first PMP report shall be due February 28, 2019.*

Response: We agree and revised Provision VI.C.3.b as follows:

- b.** The Discharger shall submit an annual report no later than February 28 each year, with the first report due February 28, 2019. Each annual report shall include at least the following information:...