

- F. Technology-Based Effluent Limitations.** CWA Section 301(b) and NPDES regulations at Title 40 of the Code of Federal Regulations (40 CFR) 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 applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133 and/or Best Professional Judgment (BPJ) pursuant to 40 CFR 125.3. A detailed discussion of development of the technology-based effluent limitations is included in the Fact Sheet (Attachment F).
- G. Water Quality-Based Effluent Limitations (WQBELs).** CWA section 301(b) and NPDES regulations at 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the 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 for the pollutant, WQBELs must be established using: (1) USEPA 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 (WQC), such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

- H. Water Quality Control Plans.** *The Water Quality Control Plan for the San Francisco Bay Basin* (the Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives (WQOs) for waters of the state, including surface waters and groundwater. It also includes programs of implementation to achieve WQOs. The Basin Plan was duly adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Water Board), USEPA, and the Office of Administrative Law (OAL), as required. Requirements of this Order implement the Basin Plan.

The Basin Plan does not specifically identify present and potential beneficial uses for Moffett Channel, or Guadalupe Slough, but does identify beneficial uses for South San Francisco Bay, to which Moffett Channel and Guadalupe Slough are tributary. The Basin Plan states that the beneficial uses of any specifically identified water body generally apply to all its tributaries (Basin Plan tributary rule). State Water Board Resolution No. 88-63 establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Regional Monitoring Program total dissolved solids (TDS) data at Guadalupe Slough station (C-1-3, about 7,000 feet downstream of the discharge outfall) ranged from 220 mg/L to 26,800 mg/L (with an average above 11,000 mg/L) thereby meeting an exception to Resolution No. 88-63. The MUN designation is therefore not applicable to Moffett Channel. Table 5 identifies the existing and potential beneficial uses that are applicable to South San Francisco Bay. These beneficial uses also apply to Moffett Channel in accordance with the Basin Plan tributary rule.

Although South San Francisco Bay is listed to support shellfish harvesting, according to a City of San Jose report, *Alternative Effluent Bacteriological Standards Pilot Study*, 2003, representatives from the California Department of Fish and Game have stated that no shellfish harvesting occurs in San Francisco Bay south of Foster City. In addition, the Shellfish Harvesting (SHELL) beneficial use likely does not exist in Moffett Channel or Guadalupe Slough. Both water bodies are characterized with soft mudflats and subtidal marsh, which are not suitable shellfish habitats, The Discharger’s 2004 beneficial use survey of Moffett Channel and Guadalupe Slough found no attempts by the public at shellfish harvesting over a period of 18 months (*City of Sunnyvale Water Pollution Control Plant Receiving Water User Survey Confirmation Study, December 23, 2004*).

Table 5. Beneficial Uses of South San Francisco Bay

Discharge Point	Receiving Water Name	Beneficial Uses of South San Francisco Bay
001	Moffett Channel (tributary to South San Francisco Bay via Guadalupe Slough)	Industrial Service Supply (IND) Ocean, Commercial, and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Estuarine Habitat (EST) Fish Migration (MIGR) Fish Spawning (SPWN) Preservation of Rare and Endangered Species (RARE) Wildlife Habitat (WILD) Contact Recreation (REC1) Non-contact Water Recreation (REC2) Navigation (NAV)

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the State. The CTR was amended on February 13, 2001. These rules contain WQC for priority pollutants.
- J. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger’s request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective

date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. The Basin Plan allows compliance schedules and interim effluent limitations or discharge specifications to allow time to implement a new or revised WQO.

The State Water Board adopted Resolution No. 2008-0025 on April 15, 2008, titled “Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits”, which includes compliance schedule policies for pollutants that are not addressed by the SIP. This policy has been approved by USEPA and OAL, and became effective on August 27, 2008, superseding the Basin Plan’s compliance schedule policy.

This Order includes a compliance schedule for dioxin-TEQ as allowed by the Basin Plan, and consistent with the State Water Board’s new policy. A detailed discussion of the basis for the compliance schedule and interim effluent limitation and/or discharge specifications is included in the Fact Sheet (Attachment F).

- L. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes. [65 Fed. Reg. 24641 (April 27, 2000) (codified at 40 CFR 131.21)]. Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on oil and grease, pH, total suspended solids (TSS), carbonaceous biochemical oxygen demand (CBOD), and residual chlorine. Derivation of these technology-based limitations is discussed in the Fact Sheet (Attachment F). This Order’s technology-based pollutant restrictions implement the minimum applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum federal technology-based requirements that are necessary to meet water quality standards.

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan were approved under State law and submitted to USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless “applicable water quality standards for the purposes of the CWA” pursuant to 40 CFR 131.21(c)(1). Collectively, this Order’s restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

- N. Antidegradation Policy.** NPDES regulations at 40 CFR 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 in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing quality of waters 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. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

- O. Anti-Backsliding Requirements.** CWA sections 402(o)(2) and 303(d)(4) and NPDES regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. As discussed in detail in the Fact Sheet, the permitted discharge is consistent with anti-backsliding requirements.
- P. Endangered Species Act.** 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 sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.
- Q. Monitoring and Reporting Program (MRP, Attachment E).** NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The MRP establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.
- R. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- S. Provisions and Requirements Implementing State Law.** No provisions or requirements in this Order are included to implement State law only. All provisions and requirements are required or authorized under the federal CWA; consequently, violations of these provisions and requirements are subject to the enforcement remedies that are available for NPDES violations.
- T. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of this notification are provided in the Fact Sheet (Attachment F).

U. 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 (Attachment F).

IT IS HEREBY ORDERED that this Order supersedes Order No. R2-2003-0079, except for enforcement purposes, and in order to meet the provisions contained in Division 7 of the California Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

- A. Discharge of treated wastewater at a location or in a manner different from that described in this Order is prohibited.
- B. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in Subsections I.G.2 and I.G.4 of Attachment D of this Order.
- C. The average dry weather effluent flow as measured at monitoring station EFF-002, described in the attached MRP (Attachment E), shall not exceed 29.5 MGD. Actual average dry weather flow shall be determined for compliance with this prohibition over three consecutive dry weather months each year.
- D. 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 for Conventional and Non-Conventional Pollutants – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001 with compliance measured at Monitoring Location EFF-001 as described in the MRP (Attachment E).

1. CBOD, TSS, Oil and Grease, pH, Total Chlorine Residual, and Turbidity

Table 6. Effluent Limitations for CBOD, TSS, Oil and Grease, pH, Total Chlorine Residual, Turbidity and Total Ammonia – Discharge Point 001

Parameter	Units ⁽¹⁾	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
CBOD ₅	mg/L	10	---	20	---	---
TSS	mg/L	20	---	30	---	---
Oil and Grease	mg/L	5	---	10	---	---
pH ⁽²⁾	standard units	---	---	---	6.5	8.5
Total Chlorine	mg/L	---	---	---	---	0.0

Residual ⁽³⁾						
Turbidity	NTU	---	---	---	---	10
Total Ammonia (October-May)	mg/L as nitrogen	18	---	26	---	---
Total Ammonia (June-September)	mg/L as nitrogen	2.0	---	5.0	---	---

Footnotes for Table 6:

(1) Unit abbreviation:

mg/L = milligrams per liter

NTU = Nephelometric turbidity units

(2) If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

(3) The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine, and sulfur dioxide dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff will conclude that these false positive chlorine residual exceedances are not violations of the effluent limitation.

2. **CBOD₅ and TSS 85% Percent Removal.** The average monthly percent removal of CBOD₅ and TSS values, by concentration, shall not be less than 85 percent.

3. **Enterococcus Bacteria.** The treated wastewater shall meet the following limit of bacteriological quality:

The 30-day geometric mean value for all samples analyzed for enterococcus bacteria shall not exceed 35 colonies per 100 mL.

B. Effluent Limitations for Toxic Pollutants – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP (Attachment E).

Table 7. Effluent Limitations for Toxic Pollutants

Pollutant	Units ⁽⁴⁾	Effluent Limitations ^(1,2)	
		Average Monthly Effluent Limitation (AMEL)	Maximum Daily Effluent Limitation (MDEL)
Copper	µg/L	10	20
Nickel	µg/L	24	37
Cyanide	µg/L	8.0	18
Dioxin-TEQ ⁽³⁾	µg/L	1.4×10^{-8}	2.8×10^{-8}
Chlorodibromomethane	µg/L	34	93
Endrin	µg/L	0.0019	0.0038
Tributyltin	µg/L	0.0061	0.012

Footnotes for Table 7:

- (1) a. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month).
- b. All limitations for metals are expressed as total recoverable metal.
- (2) A daily maximum or average monthly value for a given constituent shall be considered noncompliant with the effluent limitations only if it exceeds the effluent limitation and the Reporting Level associated with the minimum level (ML). The required MLs for pollutants with effluent limitations are listed below.

Table 8. MLs for Pollutants with Effluent Limitations

Pollutant	ML	Units ⁽⁴⁾
Copper	2	µg/L
Nickel	1	µg/L
Cyanide	5	µg/L
Chlorodibromomethane	0.5	µg/L
Endrin	0.01	µg/L
Total Ammonia	0.2	mg/L
Dioxin-TEQ	As specified below	
2,3,7,8-TetraCDD	5	pg/L
1,2,3,7,8-PentaCDD	25	pg/L
1,2,3,4,7,8-HexaCDD	25	pg/L
1,2,3,6,7,8-HexaCDD	25	pg/L
1,2,3,7,8,9-HexaCDD	25	pg/L
1,2,3,4,6,7,8-HeptaCDD	25	pg/L
OctaCDD	50	pg/L
2,3,7,8-TetraCDF	5	pg/L
1,2,3,7,8-PentaCDF	25	pg/L
2,3,4,7,8-PentaCDF	25	pg/L
1,2,3,4,7,8-HexaCDF	25	pg/L
1,2,3,6,7,8-HexaCDF	25	pg/L
1,2,3,7,8,9-HexaCDF	25	pg/L
2,3,4,6,7,8-HexaCDF	25	pg/L
1,2,3,4,6,7,8-HeptaCDF	25	pg/L
1,2,3,4,7,8,9-HeptaCDF	25	pg/L
OctaCDF	50	pg/L
Tributyltin	0.005	µg/L

- (3) Final effluent limitations for dioxin-TEQ shall become effective starting October 1, 2019.
- (4) Unit Abbreviation
mg/L = milligrams per liter
µg/L = micrograms per liter
pg/L = picograms per liter

C. Interim Effluent Limitation for Dioxin-TEQ

The Discharger shall comply with the following interim effluent limit for dioxin-TEQ at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP (Attachment E). The interim limit for dioxin-TEQ shall remain in effect until September 30, 2019. Starting October 1, 2019, the final effluent limit in Table 7 for dioxin-TEQ shall become effective.

Table 9. Interim Effluent Limitation for Dioxin-TEQ

Pollutant	Units	Average Monthly Effluent Limitation (AMEL)
Dioxin-TEQ	µg/L	6.3×10^{-5}

D. Whole Effluent Toxicity**1. Whole Effluent Acute Toxicity**

- a. Representative samples of the effluent at Discharge Point 001, with compliance measured at EFF-001 as described in the MRP (Attachment E), shall meet the following limits for acute toxicity. Bioassays shall be conducted in compliance with Section V.A of the MRP (Attachment E).

- (1) an eleven (11)-sample median value of not less than 90 percent survival, and
- (2) an eleven (11)-sample 90th percentile value of not less than 70 percent survival.

- b. These acute toxicity limitations are further defined as follows:

- (1) **11-sample median.** A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.
- (2) **11-sample 90th percentile.** A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

- c. Bioassays shall be performed using the most up-to-date USEPA protocol and the most sensitive species as specified in writing by the Executive Officer based on the most recent screening test results. Bioassays shall be conducted in compliance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, currently 5th Edition (EPA-821-R-02-012), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

2. Whole Effluent Chronic Toxicity

- a. There shall be no chronic toxicity in the discharge. Chronic toxicity is a detrimental biological effect of growth rate, reproduction, fertilization success, larval development, or any other relevant measure of the health of an organism population or community.

Compliance with this limit shall be determined by analyses of indicator organisms and toxicity tests. Compliance shall be measured at EFF-001 as described in the MRP (Attachment E).

- b. The chronic toxicity of the effluent shall be expressed and reported in toxic units (TU_c), where

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

- c. The Discharger shall comply with the following tiered requirements based on results from representative samples of the effluent at Discharge Point 001, with compliance measured at EFF-001 as described in the MRP (Attachment E), meeting test acceptability criteria and Section V.B of the MRP (Attachment E):
- (1) Conduct routine monitoring.
 - (2) Conduct accelerated monitoring after exceeding a three sample median of 1 chronic toxicity unit (TU_c¹) or a single-sample maximum of 2 TU_c or greater.
 - (3) Return to routine monitoring if accelerated monitoring does not exceed the “trigger” in (2), above.
 - (4) If accelerated monitoring confirms consistent toxicity in excess of either “trigger” in (2), above, initiate toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) procedures in accordance with Provision VI.C.2.d.ii.
 - (5) Return to routine monitoring after appropriate elements of TRE workplan are implemented and either the toxicity drops below “trigger” levels in (2), above, or, based on the results of the TRE, the Executive Officer authorizes a return to routine monitoring.
- d. The Discharger shall comply with Provision VI.C.2.d, which requires a “Chronic Toxicity Identification and Toxicity Reduction Study” in accordance with a schedule set forth in Provision VI.C.2.d.i.
- e. The Discharger shall monitor chronic toxicity using the test species and protocols specified in Section V.B of the MRP (Attachment E). The Discharger shall also perform chronic toxicity screening phase monitoring as described in the Appendix E-1 of the MRP (Attachment E). Chronic toxicity screening phase requirements, critical life stage

¹ A TU_c equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC, EC, or NOEC values. These terms, their usage, and other chronic toxicity monitoring program requirements are defined in more detail in the MRP (**Attachment E**). Monitoring and TRE requirements may be modified by the Executive Officer in response to the degree of toxicity detected in the effluent or in ambient waters related to the discharge.

toxicity tests and definitions of terms used in the chronic toxicity monitoring are identified in Appendices E-1 and E-2 of the MRP (Attachment E). In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, currently third edition (EPA-821-R-02-014), and “*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*,” currently second Edition (EPA/600/4-91/003), with exceptions granted by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

E. Land Discharge Specifications

Not Applicable.

F. Reclamation Specifications

Regional Water Board Order No. 94-069 established water reclamation requirements for the Discharger.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. Receiving water limitations are based on WQOs contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Moffett Channel, Guadalupe Slough, or South San Francisco Bay:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foams;
 - b. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil and other products of petroleum origin; and
 - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or which render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State within one foot of the water surface:
 - a. Dissolved Oxygen 5.0 mg/L, minimum
Furthermore, the median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall

not cause further reduction in ambient dissolved oxygen concentrations.

- b. Dissolved Sulfide Natural background levels
 - c. pH The pH shall not be depressed below 6.5 or raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
 - d. Nutrients Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
3. The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved, the Regional Water Board may revise and modify this Order in accordance with such more stringent standards.

B. Groundwater Limitations

Not Applicable.

VI. PROVISIONS

A. Standard Provisions

- 1. Federal Standard Provisions.** The Discharger shall comply with Federal Standard Provisions included in Attachment D of this Order.
- 2. Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items of the Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits (Attachment G).

B. MRP Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. The Discharger shall also comply with applicable sampling and reporting requirements in the two Standard Provisions listed in VI.A above.

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 discharge(s) governed by this Order will have, or will cease to have, a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.
- b. If new or revised WQOs or total maximum daily loads (TMDLs) come into effect for the San Francisco Bay estuary and contiguous water bodies (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order will be modified as necessary to reflect updated WQOs and waste load 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 WQOs, TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.
- c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified.
- d. If the receiving water does not meet promulgated ammonia objectives.
- e. If State Water Board precedential decisions, new policies, new laws, or new regulations on chronic toxicity or total chlorine residual become available.
- f. If administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge.
- g. Or as otherwise authorized by law.

The Discharger may request permit modification based on the above. The Discharger shall include in any such request an antidegradation and anti-backsliding analysis.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Effluent Characterization for Selected Constituents

The Discharger shall continue to monitor and evaluate the discharge from Discharge Point 001 (measured at EFF-001) for the constituents listed in the Regional Standard Provisions (Attachment G) according to the sampling frequency specified in the attached MRP (Attachment E).

The Discharger shall evaluate on an annual basis if concentrations of any constituents increase over past performance. The Discharger shall investigate the cause of the increase. The investigation may include, but need not be limited to, an increase in the effluent monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. This requirement may be satisfied through identification of these constituents as “pollutants of concern” in the Discharger’s Pollutant Minimization Program, described in Provision VI.C.3, below. A summary of the annual evaluation of data and source investigation activities shall also be provided in the annual self-monitoring report.

A final report that presents all the data shall be submitted to the Regional Water Board no later than 180 days prior to the Order expiration date. This final report shall be submitted with the application for permit reissuance.

b. Ambient Background Receiving Water Study

The Discharger shall collect or participate in collecting background, receiving water monitoring data for priority pollutants that are required to perform a reasonable potential analysis and to calculate effluent limitations. Data for conventional water quality parameters (pH, salinity, and hardness) shall be sufficient to characterize these parameters in the receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through participation in the Collaborative Bay Area Clean Water Agencies (BACWA) Study or a similar ambient monitoring program for San Francisco Bay, such as the Regional Monitoring Program. This Order may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

The Discharger shall submit, or cause to have submitted on its behalf, a final report that presents all such data to the Regional Water Board 180 days prior to expiration of this Order. This final report shall be submitted with the application for permit reissuance.

c. Avian Botulism Control Program

The Discharger shall continue to monitor the facility oxidation ponds, and Moffett Channel, Guadalupe Slough, and South San Francisco Bay for the presence of avian botulism, and to control outbreaks through the prompt collection of sick and dead vertebrates. The Discharger shall continue to submit annual reports by February 28 each year regarding its Avian Botulism Control Program to the Regional Water Board, the California Department of Fish and Game (CDFG), and the U.S. Fish and Wildlife Service (USFWS).

d. Chronic Toxicity Identification and Toxicity Reduction Study

i. Focused Chronic Toxicity Identification and Reduction Tasks and Schedule to Address Chronic Toxicity Measured in the Discharge

The Discharger shall comply with the following tasks and schedule to identify and reduce chronic toxicity in its effluent. The deadlines established below are not a compliance schedule or an allowance by the Regional Water Board of any toxicity violations that occur during the course of the toxicity identification and reduction efforts.

Table 10. Chronic Toxicity Identification and Reduction Tasks and Schedule

Task	Compliance Date
(1) Review Plant practices and conditions, and past Toxicity Identification Evaluation (TIE) efforts, to identify all possible causes of previously observed effluent chronic toxicity. Submit a report on the findings of this review.	December 1, 2009
(2) Submit a TIE/TRE study plan acceptable to the Executive Officer for a program to identify the cause including possible reduction measures of observed chronic toxicity and to examine whether the receiving water is impacted by the discharge with respect to toxicity. The study plan shall consist at a minimum of the following elements: (a) Investigate procedures for collecting and handling samples used for whole effluent toxicity tests to ensure that samples are representative	December 1, 2009

Task	Compliance Date
<p>and uncontaminated.</p> <p>(b) Investigate effects of oxidation pond algae and related by-products on effluent chronic toxicity, and possible ways to reduce toxicity from those effects.</p> <p>(c) Investigate polymers used in air flotation tanks and their effects on chronic toxicity, and possible ways to reduce toxicity from those effects.</p> <p>(d) Investigate elevated sulfur dioxide concentrations on chronic toxicity, and possible ways to reduce toxicity caused by sulfur dioxide if it is found to be a source of toxicity.</p> <p>(e) Investigate any other possible circumstances and pollutants present in the wastewater that may cause chronic toxicity, and the sources and possible ways to reduce the sources.</p> <p>(f) Collect samples of intermediate waste streams for chronic toxicity testing to determine if treatment processes or its chemical contribute to observed toxicity.</p> <p>(g) Conduct chronic toxicity tests at least twice per month during December, January, February, and March. Conduct chronic toxicity test at least once per month during other times of the year. If any test result is above the TRE workplan trigger, initiate a TIE to identify the cause. Monitoring conducted pursuant to a TIE/TRE shall satisfy the requirements for routine and accelerated monitoring while the TIE/TRE is underway. Tests shall consist of effluent with laboratory water as diluent, and effluent with receiving water as diluent. Receiving water samples may be collected in Moffett Channel or further away from influence of the discharge.</p> <p>(h) Identify a schedule to implement the TIE/TRE study plan. The study length shall be a minimum of two years (including two full wet and dry seasons).</p>	
(3) Initiate the study described in Task (2) above. If at any time the Discharger identifies and confirms a cause (or causes) of toxicity, it shall immediately initiate all reasonable efforts to reduce that toxicity and shall not delay or wait until required to do so by the tasks and deadlines identified below.	January 15, 2010
(4) Submit a final report including all the findings and identified causes of toxicity. Based on these findings and consideration of past TRE efforts, prepare and submit a work plan to reduce chronic toxicity and include an implementation schedule.	March 1, 2012.
(5) Begin implementation of the work plan to reduce chronic toxicity as described in Task (4) above.	April 15, 2012
(6) Report status of efforts annually, including any necessary revision or updates to the work plan. The Discharger may request to the Executive Officer to stop submitting annual status reports after June 30, 2013, if it has successfully addressed the chronic toxicity issue.	Annually on June 30 with first report due June 30, 2010
(7) Submit a final report documenting the efforts to reduce chronic toxicity; propose additional measures if the discharge is still above the chronic toxicity triggers specified in IV.D.2.c.(2).	October 1, 2013

ii. General Chronic Toxicity Reduction Evaluation (TRE) Requirements

- (1) The TRE shall be specific to the discharge and be prepared in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process, such as summarized below:
 - (a) Tier 1 consists of basic data collection (routine and accelerated monitoring).
 - (b) Tier 2 consists of evaluation of optimization of the treatment process, including operation practices and in-Plant process chemicals.
 - (c) Tier 3 consists of a toxicity identification evaluation (TIE).
 - (d) Tier 4 consists of evaluation of options for additional effluent treatment processes.
 - (e) Tier 5 consists of evaluation of options for modifications of in-Plant treatment processes.
 - (f) Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.
- (2) During the TIE/TRE process, the Discharger shall collect effluent samples and conduct chronic toxicity tests at least twice per month. Monitoring conducted pursuant to a TIE/TRE shall satisfy the requirements for routine and accelerated monitoring while the TIE/TRE is underway.
- (3) The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity except as required by Provision VI.C.2.d.i.
- (4) The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.
- (5) As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the source(s) and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with chronic toxicity evaluation parameters.
- (6) Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention and storm water 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 comply with TRE requirements.
- (7) The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

e. Receiving Water Ammonia Characterization Study

The Discharger shall comply with the following tasks and schedule to evaluate the concentrations of total ammonia and un-ionized ammonia in the effluent and receiving waters, the variability in the discharge, any mixing and dilution in the receiving waters, and any more-stringent ammonia criteria that may become effective in the foreseeable future.

Table 11. Receiving Water Ammonia Characterization Study Tasks and Schedule

Tasks	Compliance Date
(1) Submit a study plan for a minimum two-year study that includes the following elements: <ul style="list-style-type: none"> (a) effluent and receiving water sampling locations (receiving water locations, at a minimum, 200, 500, 1000, and 2000 feet downstream from the outfall in Moffet Channel; an upstream station that is not impacted by the discharge in Moffet Channel, if applicable; and stations upstream and downstream of the confluence of Moffett Channel in Guadalupe Slough, which may be the same stations in the <i>City of Sunnyvale WPCP Receiving Water Ammonia Investigations 2001 Final Report, June 29, 2001</i>), (b) sampling and analysis protocols (including means to evaluate diurnal conditions, such as continuous monitoring), (c) sampling parameters (including, at a minimum, pH, salinity, temperature, hardness, and total ammonia), (d) data interpretation models and other methods to be used (representing conservative, reasonable worst case conditions), and (e) implementation schedule. 	December 1, 2009
(2) Begin implementation of the study plan developed for Task (1).	January 15, 2010
(3) Submit annual status reports for all the tasks required by this Provision that contain, at minimum, monitoring data collected during the previous year and necessary updates to all the study plans specified in this provision.	Annually, on February 1, with the annual self-monitoring reports (SMRs) required by MPR (Attachment E)
(4) Submit a final study report that includes the following elements: <ul style="list-style-type: none"> (a) sampling results, data interpretation, and conclusions, such as receiving water characterization, seasonal/diurnal variability, etc.; (b) proposed mixing zone (consistent with <i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> § 1.4.2.2) and dilution credit, if any; (c) determination if there is reasonable potential for the discharge to cause receiving water to exceed applicable ammonia objectives (based on any proposed dilution and based on a no dilution scenario) using procedures outlined in the Technical Document for Toxics Control (also see Fact Sheet, Attachment F, Pages F-24 to F-28); (d) if there is reasonable potential, total ammonia effluent concentration goals that account for applicable ammonia objectives and WQC that may foreseeably become applicable standards or objectives within the term of this permit or the next permit term, such as USEPA’s <i>1999 Update of Ambient Water Quality Criteria for Ammonia</i> (EPA-822-R-99-014); and (e) Compliance attainability with the total ammonia concentration goals described above. 	April 15, 2012

Tasks	Compliance Date
(5) If there is reasonable potential and there would be compliance difficulty with the total ammonia concentration goals in task (4), submit a study plan that includes the following elements: (1) investigate treatment options to achieve compliance with the ammonia concentration goals, including a description and summary of the treatment options with a discussion of the pros and cons of each, (2) plan for bench scale tests or pilot scale tests or both, and (3) implementation schedule.	June 15, 2012
(6) Begin implementation of the study plan developed for Task (5) for those tasks necessary to comply with the total ammonia effluent concentration goals based on the ammonia objectives in effect at that time.	August 1, 2012
(7) After completion of Task (6), submit a report summarizing results of Task (6) and a study plan that includes the following elements: (a) measures the Discharger will take to comply with the ammonia concentration goals, including the following, as relevant: i. development of preliminary design specifications, ii. development of final design specifications, iii. procurement of funding, iv. acquisition of necessary permits and approvals, and v. construction; and (b) implementation schedule for the above measures.	August 1, 2013
(8) Begin implementation of the study plan developed for Task (7).	September 15, 2013
(9) Submit annual status reports and a final report documenting results of Task (8).	Annually by February 1 with the annual SMR required by Attachment E; final report is due within 90 days of completing Task (8).

f. Optional Mass Offset

If the Discharger can demonstrate that further net reductions of the total mass loadings of 303(d)-listed pollutants to the receiving water cannot be achieved through economically feasible measures such as aggressive source control, wastewater reuse, and treatment Plant optimization, but only through a mass offset program, the Discharger may submit to the Regional Water Board for approval a mass offset plan to reduce 303(d)-listed pollutants to the same watershed or drainage basin. The Regional Water Board may modify this Order to allow an approved mass offset program.

g. Optional Near-Field Site-Specific Translator Study

The Discharger has the option to conduct a receiving water study, near-field to the discharge, during the term of this Order for determination of new, near-field site-specific translators for chromium, zinc, and lead for use during the next permit reissuance. If the Discharger plans to perform the study, then it shall follow the tasks and schedules below.

Table 12. Optional Site-Specific Translator Study Tasks and Schedule

Task	Schedule
(1) Submit a study plan acceptable to the Executive Officer.	At the Discharger’s discretion

Task	Schedule
(2) Commence data collection.	Within 45 days after submitting the study plan
(3) Submit a final study report documenting the study and proposing translators for the discharge.	Within 60 days after data collection.

h. Total Suspended Solids (TSS) Removal

This Order retains the TSS effluent limitations of 20/30 mg/L (monthly average/daily maximum) from the previous Order; however, the Regional Water Board has established more stringent TSS effluent limitations (10/20 mg/L) for other nearby major dischargers with advanced-secondary treatment (filters).

At least 180 days prior to the expiration date of this Order, the Discharger shall submit to the Regional Water Board a report that addresses removal of TSS by the Plant. The report shall include, but not be limited to the following components:

- A summary of influent and effluent TSS data for the previous five-year period,
- Description of existing components of wastewater treatment, including processes employed and equipment/treatment units age,
- Discussion of TSS removals achieved versus expected, in light of the specific treatment processes employed and/or then available at the Plant, and
- Evaluation of operational changes to enhance TSS removal.

3. Best Management Practices and Pollution Minimization

a. Pollution Minimization Program (PMP)

The Discharger shall continue to improve, in a manner acceptable to the Executive Officer, its PMP to reduce pollutant loadings to the treatment Plant and therefore to the receiving waters.

b. Annual Pollution Prevention (P2) Report

The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year. Each annual report shall include at least the following information:

- (1) *A brief description of the treatment Plant, treatment Plant processes and service area.*
- (2) *Discussion of current pollutants of concern.* Periodically, the Discharger shall determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall address why the pollutants were identified as pollutants of concern.
- (3) *Identification of sources of pollutants of concern.* This discussion shall address how the Discharger identifies pollutant sources. The Discharger should also identify

sources or potential sources not directly within its ability or authority to control, such as pollutants in the potable water supply and air deposition.

- (4) *Identification and implementation of measures to reduce the sources of the pollutants of concern.* This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. The Discharger may implement the tasks themselves or participate in a regional, State, or national group to address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.
- (5) *Outreach to employees.* The Discharger shall inform its employees regarding pollutants of concern, potential sources, and how they might be able to help reduce the discharge of these pollutants. The Discharger may provide a forum for employees to provide input to the program.
- (6) *Continuation of Public Outreach Program.* The Discharger shall prepare a public outreach program to communicate pollution minimization measures to 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 various media. Information shall be specific to target audiences. The Discharger shall coordinate with other agencies as appropriate.
- (7) *Discussion of criteria used to measure the PMP's and tasks' effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its PMP. This discussion shall address specific criteria used to measure the effectiveness of each task identified in Provision VI.C.3.b.(3–6), above.
- (8) *Documentation of efforts and progress.* This discussion shall detail all of the Discharger's activities in the PMP during the reporting year.
- (9) *Evaluation of the PMP's and tasks' effectiveness.* The Discharger shall use the criteria established in b.(7), above, to evaluate the PMP's and tasks' effectiveness.
- (10) *Identification of specific tasks and time schedules for future efforts.* Based on the evaluation of effectiveness, the Discharger shall describe how it will continue or change its PMP tasks to more effectively reduce the loading of pollutants to the treatment Plant and therefore in its effluent.

c. PMP for Pollutants with Effluent Limitations

The Discharger shall develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

- (1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or

- (2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in the SIP.

d. PMP Submittals for Pollutants with Effluent Limitations

If triggered by the reasons in c, above, the Discharger's PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

- (1) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data;
- (2) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer, when it is demonstrated that influent monitoring is unlikely to produce useful analytical data;
- (3) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- (4) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- (5) The annual report required by 3.b. above, shall specifically address the following items:
 - i. All PMP monitoring results for the previous year,
 - ii. A list of potential sources of the reportable priority pollutant(s),
 - iii. A summary of all actions undertaken pursuant to the control strategy, and
 - iv. A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. Wastewater Facilities, Review and Evaluation, and Status Reports

- (1) The Discharger shall operate and maintain its wastewater collection, treatment, and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order 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.
- (2) The Discharger shall regularly review and evaluate its wastewater facilities and operation practices in accordance with section a(1), above. Reviews and evaluations

shall be conducted as an ongoing component of the Discharger's administration of its wastewater facilities.

- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its wastewater facilities and operation practices, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures, and applicable wastewater facility programs or capital improvement projects.

b. Operations and Maintenance Manual (O&M), Review, and Status Reports

- (1) The Discharger shall maintain an O&M Manual for the Discharger's wastewater facilities. The O&M Manual shall be maintained in usable condition and be available for reference and use by all applicable personnel.
- (2) The Discharger shall regularly review, revise, or update, as necessary, the O&M Manual(s) to ensure that the document(s) may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed within 90 days of completion of such changes.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its O&M manual, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its operations and maintenance manual.

c. Reliability Status Report

- (1) The Discharger shall maintain a Reliability Status Report for the Discharger's wastewater facilities, which will allow the Regional Water Board to evaluate the reliability of the Discharger's system in preventing inadequately treated wastewater from being discharged into the receiving waters. The Reliability Status Report shall be maintained in usable condition and be available for reference and use by all applicable personnel.
- (2) The Discharger shall regularly review, revise, or update, as necessary, the Reliability Status Report to ensure that the document may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary. For any significant changes in treatment facility equipment or operation practices, applicable revisions shall be completed as soon as practical.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Reliability Status Report, including any recommended or planned actions and an estimated time schedule for these actions. The Discharger shall also include, in each annual self-monitoring report, a description or summary of

review and evaluation procedures and applicable changes to its Reliability Status Report.

d. Contingency Plan, Review, and Status Reports

- (1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution No. 74-10 (see Regional Standard Provisions [Attachment G]) and as prudent in accordance with current municipal facility emergency planning. The discharge of pollutants in violation of this Order where the Discharger has failed to develop and/or adequately implement a Contingency Plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the CWC.
- (2) The Discharger shall regularly review and update, as necessary, the Contingency Plan so that the plan may remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and updates shall be completed as necessary.
- (3) The Discharger shall provide the Executive Officer, upon request, a report describing the current status of its Contingency Plan review and update. The Discharger shall also include, in each annual self-monitoring report, a description or summary of review and evaluation procedures and applicable changes to its Contingency Plan.

5. Special Provisions for POTWs

a. Pretreatment Program

- (1) The Discharger shall implement and enforce its approved pretreatment program in accordance with federal Pretreatment Regulations (40 CFR 403), pretreatment standards promulgated under Sections 307(b), 307(c), and 307(d) of the CWA, pretreatment requirements specified under 40 CFR 122.44(j), and the requirements in Attachment H, "Pretreatment Requirements." The Discharger's responsibilities include, but are not limited to:
 - i. Enforcement of National Pretreatment Standards of 40 CFR 403.5 and 403.6;
 - ii. Implementation of its pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and its approved pretreatment program;
 - iii. Submission of reports to USEPA, the State Water Board, and the Regional Water Board, as described in Attachment H "Pretreatment Requirements".
 - iv. Evaluate the need to revise local limits under 40 CFR 403.5(c)(1); and within 180 days after the effective date of this Order, submit a report acceptable to the Executive Officer describing the changes with a plan and schedule for implementation. To ensure no significant increase in the discharge of copper, and thus compliance with antidegradation requirements, the Discharger shall not consider eliminating or relaxing local limits for copper in this evaluation.

- (2) The Discharger shall implement its approved pretreatment program and the program shall be an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the Regional Water Board, the State Water Board, or the USEPA may take enforcement actions against the Discharger as authorized by the Clean Water Act.

b. Biosolids Management Practices Requirements

- (1) All biosolids generated by the Discharger must be disposed of in a municipal solid waste landfill, used as part of a waste-to-energy facility, reused by land application, or disposed of by surface disposal or in a sludge-only landfill (such as the City of Sunnyvale's Biosolids Monofill) in accordance with 40 CFR 503. If the Discharger desires to dispose of biosolids by a different method, a request for permit modification must be submitted to USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board should be copied on relevant correspondence and reports forwarded to USEPA regarding biosolids management practices.
- (2) Biosolids treatment, storage and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.
- (3) The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal which has a likelihood of adversely affecting human health or the environment.
- (4) The discharge of biosolids shall not cause waste material to be in a position where it is or can be carried from the sludge treatment and storage site and deposited in waters of the State.
- (5) The biosolids treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.
- (6) For biosolids applied to the land, placed on a surface disposal site, or fired in a biosolids incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503, postmarked February 15 of each year, for the period covering the previous calendar year.
- (7) Biosolids disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. In the annual self-monitoring report, the Discharger shall include the amount of sludge disposed of and the landfill(s) to which it was sent.
- (8) Permanent on-site biosolids storage or disposal activities are not authorized by this Order. 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 by the Discharger.

- (9) Biosolids Monitoring and Reporting Provisions of the Regional Standard Provisions (Attachment G), apply to biosolids handling, disposal and reporting practices.
- (10) The Regional Water Board may amend this Order prior to expiration if changes occur in applicable State and federal biosolids regulations.

c. Sanitary Sewer Overflows and Sewer System Management Plan

The Discharger's collection system is part of the facility that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (Attachment D, Standard Provisions - Permit Compliance, subsection I.D). The Discharger must report any noncompliance (Attachment D, Standard Provisions - Reporting, subsections V.E.1 and V.E.2), and mitigate any discharge from the Discharger's collection system in violation of this Order (Attachment D, Standard Provisions - Permit Compliance, subsection I.C). The General Waste Discharge Requirements for Collection System Agencies (General Collection System WDR, Order No. 2006-0003 DWQ) has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Collection System WDR and this Order, the General Collection System WDR more clearly and specifically stipulates requirements for operation and maintenance and for reporting and mitigating sanitary sewer overflows.

Implementation of the General Collection System WDR requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in this Order. Following reporting requirements in the General Collection System WDR will satisfy NPDES reporting requirements for sewage spills. Furthermore, the Discharger shall comply with the schedule for development of sewer system management plans (SSMPs) as indicated in the letter issued by the Regional Water Board on July 7, 2005, pursuant to CWC section 13267; and with the sanitary sewer overflow and unauthorized discharge notification and reporting requirements of the letter issued by the Regional Water Board on May 1, 2008, pursuant to CWC Section 13267. The Discharger fulfilled this requirement by August 31, 2008. The Discharger shall report sanitary sewer overflows electronically using the State Water Board's statewide online reporting system.

6. Other Special Provisions

a. Cyanide Action Plan

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

Table 13. Cyanide Action Plan

Task	Compliance Date
<p>(1) Review Potential Cyanide Contributors</p> <p>The Discharger shall submit an inventory of potential contributors of cyanide to the wastewater treatment facility (e.g., metal plating operations, hazardous waste recycling, etc.). If no contributors of cyanide are identified, Tasks 2 and 3 are not required, unless the Discharger receives a request to discharge detectable levels of cyanide to the sanitary sewer. If so, the Discharger shall notify the Executive Officer and implement Tasks (2) and (3).</p>	<p>December 1, 2009</p>
<p>(2) Implement Cyanide Control Program</p> <p>The Discharger shall submit a plan for, and begin implementation of, a program to minimize cyanide discharges to the sanitary sewer system consisting, at a minimum, of the following elements:</p> <ul style="list-style-type: none"> i. Inspect each potential contributor to assess the need to include that contributing source in the control program. ii. Inspect contributing sources included in the control program annually. Inspection elements may be based on USEPA guidance, such as Industrial User Inspection and Sampling Manual for POTWs (EPA 831-B-94-01). iii. Develop and distribute educational materials to contributing sources and potential contributing sources regarding the need to prevent cyanide discharges. iv. Prepare an emergency monitoring and response plan to be implemented if a significant cyanide discharge occurs. v. If ambient monitoring shows cyanide concentrations of 1.0 µg/L or higher in the main body of San Francisco Bay, undertake actions to identify and abate cyanide sources responsible for the elevated ambient concentrations. 	<p>February 28, 2010 with 2009 annual P2 report</p>
<p>(3) Report Status of Cyanide Control Program</p> <p>Submit a report to the Regional Water Board documenting implementation of the cyanide control program.</p>	<p>Annually with P2 reports due February 28</p>

b. Copper Action Plan

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

Table 14. Copper Action Plan

Task	Compliance Date
<p>(1) Review Potential Copper Sources</p> <p>The Discharger shall submit an inventory of potential copper sources to the wastewater treatment facility.</p>	<p>December 1, 2009</p>

Task	Compliance Date
<p>(2) Implement Copper Control Program</p> <p>The Discharger shall submit a plan for and begin implementation of a program to reduce copper discharges identified in Task (1) consisting, at a minimum, of the following elements:</p> <ul style="list-style-type: none"> i. Provide education and outreach to the public (e.g., focus on proper pool and spa maintenance and plumbers’ roles in reducing corrosion). ii. If corrosion is determined to be a significant copper source, work cooperatively with local water purveyors to reduce and control water corrosivity, as appropriate, and ensure that local plumbing contractors implement best management practices to reduce corrosion in pipes. iii. Educate plumbers, designers, and maintenance contractors for pools and spas to encourage best management practices that minimize copper discharges. 	<p>February 28, 2010 with 2009 annual P2 report</p>
<p>(3) Implement Additional Measures</p> <p>If the three-year rolling mean copper concentration of South Bay exceeds 4.2 µg/L, evaluate the effluent copper concentration trend, and if it is increasing, develop and implement additional measures to control copper discharges.</p>	<p>Within 90 days of exceedance</p>
<p>(4) Report Status of Copper Control Program</p> <p>Submit a report to the Regional Water Board documenting implementation of the copper control program.</p>	<p>Annually with P2 reports due February 28</p>

c. Compliance Schedules for Dioxin-TEQ

The following table outlines actions to be completed in order to meet the final limits for dioxin-TEQ.

Table 14. Dioxin-TEQ Compliance Schedule

Task	Deadline
<p>(1) The Discharger shall continue its semi-annual dioxin monitoring at monitoring point EFF-001 and comply with the reporting requirements contained in the MRP. The Discharger shall also comply with the following interim effluent limit: Dioxin-TEQ: AMEL = 6.3×10^{-5} µg/L</p>	<p>Upon Order effective date</p>
<p>(2) If dioxin-TEQ effluent monitoring data show that the Discharger is out of compliance, as described in Section 2.4.5, Compliance Determination, of the SIP, the Discharger shall submit a plan to identify dioxin-TEQ sources to the discharge and identify source control measures to reduce concentrations of these pollutants to the treatment Plant, and therefore to receiving waters.</p>	<p>No later than 12 months after monitoring data show that the Discharger is out of compliance</p>
<p>(3) Implement the plan developed in task (2), including both pollutant source identification and source control.</p>	<p>Within 30 days of the deadline for task 2</p>
<p>(4) Submit a report that contains an inventory of the pollutant sources.</p>	<p>No later than four months after the deadline for task 2</p>

Task	Deadline
(5) Submit a report documenting development and initial implementation of a program to reduce and prevent the pollutants of concern in the discharge. The program shall consist, at a minimum, of the following elements: <ul style="list-style-type: none"> i. Maintain a list of sources of pollutants of concern. ii. Investigate each source to assess the need to include it in the program. iii. Identify and implement targeted actions to reduce or eliminate each source included in the program. iv. Develop and distribute, as appropriate, educational materials regarding the need to prevent sources to the sewer system. 	No later than six months after the deadline for task 2
(6) Continue to implement the program described in task (5) and submit annual status reports that evaluate its effectiveness and summarize planned changes. Report whether the program has successfully brought the discharge into compliance with the effluent limits in this Order.	Annually with P2 reports due February 28
(7) In the event that source control measures are insufficient for meeting final WQBELs specified in Effluent Limitations and Discharge Specifications IV.B for or dioxin-TEQ, the Discharger shall submit a schedule for implementation of additional actions to reduce the concentrations of these pollutants.	No later than 4 months after the most recent annual P2 report that identifies that additional actions are needed
(8) The Discharger shall commence implementation of the identified additional actions in accordance with the schedule submitted in task (7).	Within 45 days after the deadline for task 7
(9) Full Compliance with IV.B Effluent Limitations and Discharger Specifications for dioxin-TEQ. Alternatively, the Discharger may comply with the limits through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that time. Alternatively, the Discharger may comply with the limits through implementation of a mass offset strategy for dioxin-TEQ in accordance with policies in effect at that time.	October 1, 2019 (10 years from Order effective date)

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP, Attachment A and Section VI of the Fact Sheet of this Order. 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 priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. 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.

ATTACHMENT A – DEFINITIONS

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

$$\text{Arithmetic mean} = \mu = \Sigma x / n$$

where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

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

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

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

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as 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 Order), 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 will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the 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 through conducting a mixing zone study or modeling of the discharge and receiving water.

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

Enclosed Bays means 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, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

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

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

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

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

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

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