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Secretary of Environmental  
Protection

# California Regional Water Quality Control Board

## San Francisco Bay Region

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**ORDER NO. R2-2006-0082**  
**NPDES NO. CA0038893**



Arnold Schwarzenegger  
Governor

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision
<b>Name of Facility</b>	Seafirth Estates Wastewater Treatment Plant and its sewage collection system
<b>Facility Address</b>	33 Seafirth Place
	Tiburon, CA 94920
	Marin County

The Discharger is authorized to discharge from the following discharge points as set forth below:

**Table 2. Discharge Location**

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	POTW Effluent	37 °, 54', 08" N	122 °, 28', 08" W	Central San Francisco Bay

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Board on:	December 13, 2006
This Order shall become effective on:	March 1, 2007
This Order shall expire on:	February 29, 2012
The U.S. Environmental Protection Agency (U.S. EPA) and the Regional Water Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 96-152 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted therein, and the provisions of the Federal Clean Water Act (CWA), and regulations and guidelines adopted therein, the Discharger shall comply with the requirements in this Order.

I, Bruce H. Wolfe, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on December 13, 2006.

Bruce H. Wolfe, Executive Officer

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
REGION 2, SAN FRANCISCO BAY REGION**

ORDER No: R2-2006-0082  
NPDES NO. CA0038893

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- Self-Monitoring Program, Part A, adopted August 1993

Order No: R2-2006-0082

- Standard Provisions and Reporting Requirements, August 1993
- August 6, 2001 Staff Letter: Requirement for Priority Pollutant Monitoring in Receiving Water and Wastewater Discharges
- Regional Water Board Resolution 74-10

## I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

**Table 4. Facility Information**

<b>Discharger</b>	Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision
<b>Name of Facility</b>	Seafirth Estates Wastewater Treatment Plant and its sewage collection system
<b>Facility Address</b>	33 Seafirth Place
	Tiburon, CA 94920
	Marin County
<b>Facility Contact, Title, and Phone</b>	Bonner Buehler, Plant Operator, 415-388-1345
<b>Mailing Address</b>	33 Seafirth Place, Tiburon, CA 94920
<b>Type of Facility</b>	POTW
<b>Facility Design Flow</b>	< 0.0075 million gallons per day (MGD)

## II. FINDINGS

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

- A. **Background.** The Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision (hereinafter Discharger) are currently discharging under Order No. 96-152 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038893. The Discharger submitted a Report of Waste Discharge, dated March 15, 2001, and applied for an NPDES permit renewal to discharge up to 0.0075 MGD of treated wastewater from the Seafirth Estates Wastewater Treatment Plant. The application was deemed complete on March 12, 2003.
- B. **Facility Description.** The Seafirth Estates Company, a non-profit corporation, owns and operates a wastewater collection and treatment system (the WWTP) that serves approximately 30 single-family homes in the Seafirth Estates subdivision, located on the Tiburon peninsula off Paradise Road about three miles north of the town of Tiburon in Marin County. The WWTP consists of primary sedimentation, biological treatment using a trickling filter, followed by secondary clarification, chlorination and dechlorination. Wastewater solids are stored in a storage tank and are periodically hauled to the Sewage Agency of Southern Marin for treatment and disposal. The sewage collection system consists of about 2,500 feet of pipe that conveys the sewage by gravity to the treatment plant. Attachment B provides a location map of the area around the facility. Attachment C provides a flow schematic of the facility.
- C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (US EPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

- D. **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 through special studies. Attachments A through G, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.
- E. **California Environmental Quality Act (CEQA).** This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with CWC Section 13389.
- F. **Technology-Based Effluent Limitations.** NPDES regulations at 40 CFR 122.44 (a) require permits to include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Secondary Treatment Standards established at 40 CFR Part 133 and Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3 . A detailed discussion of the technology-based effluent limitations is included in the Fact Sheet (Attachment F).
- G. **Water Quality-Based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), or proposed State criteria or a State policy interpreting narrative criteria. A detailed discussion of the water quality-based effluent limitations is included in the Fact Sheet.
- H. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the San Francisco Bay* (the Basin Plan) that designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to Central San Francisco Bay are as follows:

**Table 5. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Central San Francisco Bay	Water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); wildlife habitat (WILD); preservation of habitat for rare and endangered species (RARE); estuarine habitat (EST); fish migration and spawning (MIGR, SPWN); shellfish harvesting (SHELL); navigation (NAV); industrial process and service supply (IND, PROC).

Requirements of this Order implement the Basin Plan.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, amending it on May 4, 1995 and November 9, 1999, and adopted the CTR on May 18, 2000, amending it on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
- 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 U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan, with the exception of the provision on alternate test procedures for individual discharges that have been approved by U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the U.S. EPA through the California Toxics Rule. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

- 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. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement new or revised WQOs. This Order includes compliance schedules and interim effluent limitations. A detailed discussion of the basis for the compliance schedules and interim effluent limitations is included in the Fact Sheet (Attachment F).
- L. **Alaska Rule.** On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to U.S. EPA after May 30, 2000, must be approved by U.S. EPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000 may be used for CWA purposes, whether or not approved by U.S. EPA.
- M. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on BOD or CBOD, TSS, Oil and Grease, pH, and chlorine residual. Restrictions on these pollutants are specified in federal regulations and have been in the Basin Plan since before May 30, 2000, as discussed in the attached Fact Sheet, Attachment F. The permit's technology-based pollutant restrictions are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent

limitations are based on the CTR-SIP, which was approved by U.S. EPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses 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 section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order (specifically Arsenic, Cadmium, Chromium (VI), Copper (fresh water), Lead, Nickel, Silver (1-hour), Zinc) were approved by U.S. EPA on January 5, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes 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 68-16, incorporating the requirements of the federal antidegradation policy and requiring that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution 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 (Attachment F), the prohibitions, limitations, and conditions of this Order are consistent with applicable federal and State anti-backsliding requirements.
- P. **Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, included as Attachment E to this Order, establishes monitoring and reporting requirements to implement federal and State requirements.
- Q. **Standard and Special Provisions.** Standard Provisions, which must be included in every NPDES permit and apply to all NPDES discharges, in accordance with 40 CFR 122.41 and 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger (Attachment G). A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- R. **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 notification are provided in the Fact Sheet (Attachment F) of this Order.
- S. **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) of 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 discharge of average dry weather flows greater than 0.0075 mgd is prohibited. The average dry weather flow shall be determined over three consecutive dry weather months each year.
- C. Discharge of wastewater at any point where it does not receive an initial dilution of at least 10:1 is prohibited.
- D. The bypass or overflow of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for bypasses under the conditions described at 40 CFR 122.41 (m) (4) and in A.12 of the Standard Provisions (Attachment G) of this Order.
- 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 for E-001

1. The discharge of treated effluent shall maintain compliance with the following effluent limitations at the Discharge Point 001, with compliance measured at Monitoring Location E-001 as described in the attached Monitoring and Reporting Program (Attachment E):

**Table 6. Effluent Limitations**

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Max Daily	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	30	45	----	----
Total Suspended Solids	mg/L	30	45	----	----
Oil & Grease	mg/L	10	----	20	----
Total Chlorine Residual <sup>[1]</sup>	mg/L	----	----	----	0.0

[1] The chlorine residual requirement is defined as below the limit of detection by standard methods of analysis, as defined in *Standard Methods for the Examination of Water and Wastewater*. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine and sodium bisulfate dosage (which could be interpolated), and chlorine concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

2. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.
3. **pH:** The pH of the discharge shall not exceed 9.0 nor be less than 6.0. If the Discharger employs continuous pH monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied.
  - a. The total time during which the pH values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
  - b. No individual excursion from the required range of pH values shall exceed 60 minutes.
4. **Total Coliform Bacteria:** The treated wastewater, at some point in the treatment process prior to discharge, shall meet the following bacteriological limitations:
  - a. The moving median value of most probable number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 mL; and,
  - b. no single sample shall exceed 10,000 MPN/100 mL.
5. **Whole Effluent Acute Toxicity:** Representative samples of the effluent shall meet the following limitations for acute toxicity. Compliance with these limitations shall be achieved in accordance with Provision VI. C. 6 of this Order:

a. The survival of bioassay test organisms in 96-hour bioassays of undiluted effluent shall be:

(1) A three (3)-sample median value of not less than 90 percent survival; and

(2) A single (1) maximum value of not less than 70 percent survival.

b. The 3-sample median acute toxicity limit is further defined as follows.

Any bioassay test showing survival of 90 percent or greater is not a violation of this limitation. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limitation, if one of the past two bioassay tests also shows less than 90 percent survival.

c. Bioassays shall be performed using the most up-to-date U.S. EPA protocol. 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, and exceptions may be granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

6. **Toxic Substances:** The discharge of effluent shall not exceed the following limitations at Discharge Point 001, with compliance measured at Monitoring Location E-001, as described in the attached Monitoring and Reporting Program (Attachment E). Interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

**Table 7. WQBELs for Toxic Pollutants**

<sup>(1)</sup> Constituent	Units	Final WQBELs		Interim Limits <sup>(2)</sup>	
		Maximum Daily (MDEL)	Monthly Average (AMEL)	Maximum Daily	Monthly Average
Copper <sup>(3)</sup>	µg/L	109	54	---	--
Zinc	µg/L	910	450	--	--
Cyanide <sup>(4)(5)</sup>	µg/L	6.4	3.2	7.0	--

(1) a. Compliance with these limitations is intended to be achieved through secondary treatment and, as necessary, pretreatment and source control.

b. All analyses shall be performed using current U.S. EPA methods, or equivalent methods approved in writing by the Executive Officer. The Discharger is in violation of the limitation if the discharge concentration exceeds the effluent limitation and the reported ML for the analysis for that constituent.

c. Limitations apply to the average concentration of all samples collected during the averaging period (daily = 24-hour period; monthly = calendar month). Maximum Daily effluent limitations based on U.S. EPA aquatic life criterion continuous concentrations may be met as a 4-day average (an average of all samples taken over a continuous 4-day period). If compliance is to be determined based on a 4-day average, the concentrations of each of the 24-hour composite samples shall be reported, as well as the average of the total number of composite samples taken over the 4-day period.

d. All metals limitations are expressed as total recoverable metal.

- (2) Interim limitations shall remain in effect until April 28, 2010 for Cyanide, or until the alternate effluent limit in note (5), below, comes into effect, or until the Regional Water Board amends the limitation(s) based on site-specific objectives (SSOs), which ever date occurs sooner.
- (3) Alternate Effluent Limits for Copper
  - (a) If a copper SSO for the receiving water becomes legally effective, resulting in adjusted saltwater CCC of 2.5 µg/L and CMC of 3.9 µg/L as documented in the *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective (SSO) Derivation* (Clean Estuary Partnership, December 2004), upon its effective date, the following limitations shall supersede the copper limitations listed in Table 7, above, (the rationale for these alternate limitations is described in the Fact Sheet (Attachment F).

MDEL = 84 µg/L and AMEL = 42 µg/L

- (b) If a different SSO for copper for the receiving water is adopted, alternate effluent limitations will be determined after the effective date of the SSO.
- (4) Compliance may be demonstrated by measurement of weak acid dissociable cyanide.
- (5) Alternate Cyanide Effluent Limitations. If a cyanide SSO for the receiving water becomes legally effective, based on the assumptions in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide in San Francisco Bay*, dated November 10, 2005, upon its effective date, the following cyanide effluent limitations shall supersede those specified above: Maximum Daily of 42 µg/L and Monthly Average of 21 µg/L.

## V. RECEIVING WATER LIMITATIONS

The surface water receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order.

A. The discharge shall not cause the following conditions in Central San Francisco Bay.

1. Floating, suspended, or deposited macroscopic particulate matter or foam;
2. Bottom deposits or aquatic growths;
3. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
4. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
5. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, 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.

B. The discharge shall not cause the following limits to be exceeded in Central San Francisco Bay.

1. Dissolved Oxygen 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. When natural factors cause lesser concentrations than those specified above, then the discharge shall not cause further reduction in the ambient concentration of dissolved oxygen.

2. Dissolved Sulfide            0.1 mg/L, maximum
3. pH                            Variation from normal ambient pH by more than 0.5 pH units
4. Un-ionized Ammonia        0.025 mg/L as N, annual median;  
   0.16 mg/L as N, maximum

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

## VI. PROVISIONS

### A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with all applicable items in the *Standard Provisions, Monitoring, and Reporting Requirements for NPDES Wastewater Discharge Permits, August 1993* (Attachment G), including any amendments thereto. Where provisions or reporting requirements specified in this Order are different from equivalent or related provisions or reporting requirements given in the Standard Provisions, the specifications of this Order shall apply. Duplicative requirements in the federal Standard Provisions in VI.A.1.2, above (Attachment D) and the regional Standard Provisions (Attachment G) are not separate requirements. A violation of a duplicative requirement does not constitute two separate violations.

### B. Monitoring and Reporting Program Requirements

1. The Discharger shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in Attachment E of this Order, and with the Self-Monitoring Program Part A, August 1993 (Attachment G).

### C. Special Provisions

#### 1. Reopener Provisions

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

- a. If present or future investigations demonstrate that the discharge(s) governed by this Order will, or cease to, have adverse impacts on water quality and/or beneficial uses of the receiving waters;
- b. As new or revised WQOs 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;
- c. If translator or other water quality studies provide a basis for determining that a permit condition(s) should be modified;
- d. An administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge;
- e. As authorized by law; and

The Discharger may request Order modification based on b, c, d, and e above. The Discharger shall include in any such request an antidegradation and antibacksliding analysis, if applicable.

## **2. Effluent Characterization for Selected Constituents**

The Discharger shall monitor and evaluate the discharge from E-001 for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, according to its approved sampling plan submitted under the August 6, 2001 Letter. The Discharger shall monitor, for a minimum of one sampling event for the constituents listed in Enclosure A of the Regional Water Board's August 6, 2001 Letter, during the permit term. Compliance with this requirement shall be achieved in accordance with the specifications stated in the Regional Water Board's August 6, 2001 Letter under Effluent Monitoring for Minor Dischargers.

The Discharger shall evaluate on an annual basis if concentrations of any constituent 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 may be satisfied through identification of these constituents as "Pollutants of Concern" in the Discharger's Pollutant Minimization Program described in Provision C.4.b, below. A summary of the annual evaluation of data and source investigation activities shall also be reported in the annual self-monitoring report.

*Reporting:* The Discharger shall submit a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

## **3. Ambient Background Receiving Water Study**

The Discharger shall collect or participate in collecting background ambient receiving water monitoring data for priority pollutants that is required to perform RPA and to calculate

effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring through the Collaborative BACWA Study, or a similar ambient monitoring program for San Francisco Bay. This permit may be reopened, as appropriate, to incorporate effluent limits or other requirements based on Regional Water Board review of these data.

*Reporting:* The Discharger shall submit a final report that presents all the data to the Regional Water Board 180 days prior to Order expiration. This final report shall be submitted with the application for permit reissuance.

#### **4. Pollutant Minimization Program**

- a. The Discharger shall conduct, in a manner acceptable to the Executive Officer, a Pollutant Minimization Program to reduce pollutant loadings of cyanide to the treatment plant and therefore to the receiving waters. The Discharger will coordinate with Sanitary District No. 5, Paradise Cove Treatment Plant, when implementing copper pollution prevention programs.
- b. The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than March 1 of each year. Annual reports shall cover January through December of the preceding year. Annual reports shall include at least the following information.
  - (1) *A brief description of its treatment facilities and treatment processes.*
  - (2) *A discussion of the current pollutants of concern.* Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the *reasons why the pollutants were chosen.*
  - (3) *Identification of sources for the pollutants of concern.* This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger shall also identify 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.
  - (4) *Identification of tasks 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 tasks itself or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will 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 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 treatment facilities. The Discharger may provide a forum for employees to provide input to the Program.

- (6) *Discussion of criteria used to measure the program's and tasks' effectiveness.* The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Minimization Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in items (3), (4), and (5), above.
- (7) *Documentation of efforts and progress.* This discussion shall detail all the Discharger's activities in the Pollution Minimization Program during the reporting year.
- (8) *Evaluation of program's and tasks' effectiveness.* The Discharger shall use the criteria established in b. (6) to evaluate the Program's and tasks' effectiveness.
- (9) *Identification of Specific Tasks and Time Schedules for Future Efforts.* Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks to more effectively reduce the amount of pollutants to the treatment facilities, and subsequently in its effluent.

c. Pollutant Minimization Program for Pollutants with Effluent Limitations

The Discharger shall develop and conduct a Pollutant Minimization Program (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:

- i. A sample result is reported as DNQ and the effluent limitation is less than the RL; or
  - ii. A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in the SIP.
- d. 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:
- i. 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;
  - ii. 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;

- iii. 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;
- iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- v. The annual report required by 3.b. above, shall specifically address the following items:
  1. All PMP monitoring results for the previous year;
  2. A list of potential sources of the reportable priority pollutant(s);
  3. A summary of all actions undertaken pursuant to the control strategy; and
  4. A description of actions to be taken in the following year

#### **5. 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 Discharge 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 Provision - 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 Discharger, at its option, may report sanitary sewer overflows electronically according to the Regional Water Board's SSO reporting program at [www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay), under "To Report a Sewage Spill". Complete reporting using this electronic system will satisfy the reporting requirements of sanitary sewer overflows required by this permit.

#### **6. Whole Effluent Acute Toxicity**

Compliance with acute toxicity requirements of this Order shall be achieved in accordance with the following:

- a. Compliance with the acute toxicity effluent limits of this Order shall be evaluated by measuring survival of test organisms exposed to 96-hour static renewal bioassays.
- b. Test organisms shall be rainbow trout and fathead minnow tested concurrently during a one-year screening period. Following receipt of the acute toxicity screening study, the Executive Officer will allow further compliance monitoring with only one fish species (the most sensitive, if determined) if the Discharger can also document that the acute toxicity has been observed in only one fish species. If within 45-days of the Discharger's request for one-species monitoring, the Executive Officer has not commented, the request shall be deemed approved.

- c. All bioassays shall be performed according to the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms," (currently 5th Edition), with exceptions granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP).

## **7. Sludge Management Practices Requirements**

- a. All sludge generated by the Discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the Discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the U.S. EPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by U.S. EPA 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 the U.S. EPA regarding sludge management practices.
- b. Sludge treatment, storage and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or results in groundwater contamination.
- c. Duty to mitigate: The Discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.
- d. The discharge of sludge 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 the waters of the State.
- e. The sludge 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.
- f. For sludge that is applied to the land, placed on a surface disposal site, or fired in a sludge incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to the U.S. EPA 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.
- g. Sludge that is 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.
- h. Permanent on-site sludge storage or disposal activities are not authorized by this permit. 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.

- i. Sludge Monitoring and Reporting Provisions of this Regional Water Board's "Standard Provisions, Monitoring and Reporting Requirements", dated August 1993, apply to sludge handling, disposal and reporting practices.
- j. The Regional Water Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

## **8. 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. 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 his or her 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 as described in the findings of this Order for the Discharger's wastewater facilities. The O & M Manual shall be maintained in usable condition, and 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) so 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 his or her 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. Contingency Plan, Review and Status Reports**

- (1) The Discharger shall maintain a Contingency Plan as required by Regional Water Board Resolution 74-10 (**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 CWC Section 13387.
- (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 his or her 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.

**9. Order Reapplication**

In accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, the Discharger must file a Report of Waste Discharge no later than 180 days before the expiration date of this Order as application for reissuance of this permit and waste discharge requirements. The application shall be accompanied by a summary of all available water quality data including conventional pollutant data from no less than the most recent three years, and of toxic pollutant data no less than from the most recent five years, in the discharge and receiving water. Additionally, the Discharger must include with the application the final results of any studies that may have bearing on the limits and requirements of the next permit.

## 10. Install Seafirth Pump Station or Modifications to Treatment Plant

The Discharger cannot currently comply with certain monitoring requirements in this Order. As the treatment plant is currently structured, the Discharger cannot monitor influent flow, effluent flow, influent BOD, influent TSS, total coliform, and residual chlorine. These are necessary monitoring requirements to determine compliance with the effluent limits and prohibitions established in this Order. As such, the Discharger shall either (1) Convert the Seafirth plant into a pump station and convey the wastewater to a neighboring treatment plant, which is currently able to comply with all permit conditions; or (2) make modifications to the treatment plant to allow monitoring for these parameters. The following conditions shall be completed by the date specified.

- a. No later than December 31, 2007, the Discharger shall send a letter to the Executive Officer, committing to fund a project which includes installation of a pump station at Seafirth and installation of a pressure line to Paradise Drive. If such letter is not received by the Executive Officer by December 31, 2007, then Provision 10(b) – (d) shall become effective. If such letter is received the Executive Officer by December 31, 2007, then Provision 10(b) - (d) will be deferred for two years. If the pump station and pressure line have not been completed within this time, the Discharger may request an extension for up to two years. Upon adequate evidence provided by the Discharger, the Executive Officer may grant, in writing, a deferral of Provision 10(b) – (d) for up to another two years. If however, the Executive Officer finds the pump station and pressure line project has stalled (e.g., no progress has been made), the Executive Officer may require the Discharger to commence with Provision 10(b) – (d).
- b. No later than March 30, 2008, the Discharger shall install influent and effluent flow meters measure the amount of wastewater treated by the treatment plant, and discharged to the Bay. These data will be used to determine compliance with Discharge Prohibition B.
- c. No later than March 30, 2008, the Discharger shall install an influent monitoring station that will allow sampling of influent BOD and TSS. These data will be used to determine compliance with the 85% Removal of BOD and TSS effluent limitation.
- d. No later than March 30, 2008, the Discharger shall install a chlorine contact chamber to provide adequate chlorine contact time to properly disinfect the wastewater. In addition, the Discharger shall install this unit in such a manner so as to allow access for sampling or monitoring for residual chlorine (both before and after dechlorination), and total coliform (after dechlorination). These data will be used to determine compliance with the residual chlorine and total coliform effluent limitations.
- e. No later than February 1, annually, the Discharger shall submit an Annual Status Report, which describes progress of the pump station/pressure line project or treatment plant modifications specified above. The Annual Report shall include updated schedules of construction/modifications, evaluation of permit compliance as modifications are made. This annual status report shall be combined with the annual self-monitoring report required by the MRP (Attachment E).

## **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 and Attachment A 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, AWEL, 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 ( $\mu$ )**, 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:

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

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

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

**Bioaccumulative** 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 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 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 U.S. EPA 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  $n/2+1$ ).

**Method Detection Limit (MDL)** is the 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 title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

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

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

**Not Detected (ND)** are those sample results less than the laboratory's MDL.

**Ocean Waters** are the 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. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

**Persistent** pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

**Pollutant Minimization Program (PMP)** means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) 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 the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

**Reporting Level (RL)** is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. 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** is 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 that a sanitary sewer system is tributary to.

**Source of Drinking Water** is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

**Standard Deviation ( $\sigma$ )** is a measure of variability that is calculated as follows:

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

where:

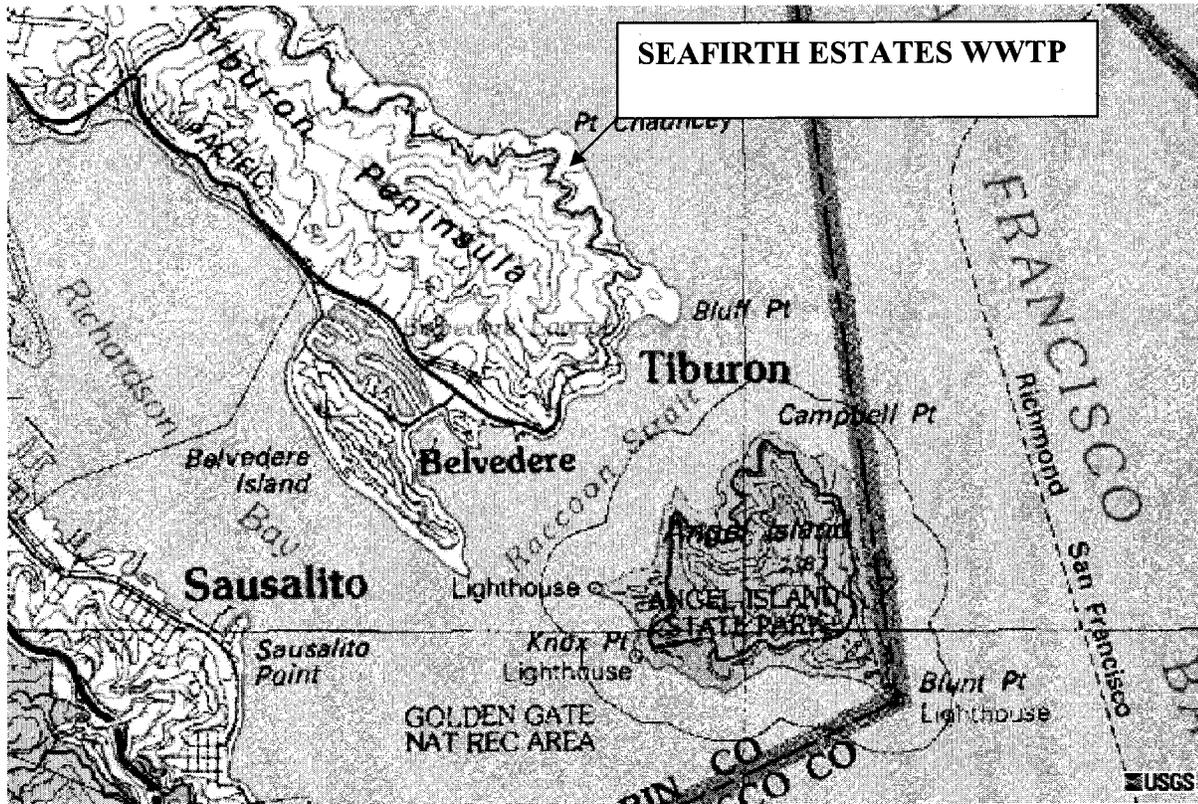
x is the observed value;

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

n is the number of samples.

**Toxicity Reduction Evaluation (TRE)** is a 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 chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

**ATTACHMENT B – LOCATION MAP**





## **ATTACHMENT D – FEDERAL STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [40 CFR §122.41(a)].
2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [40 CFR §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 CFR §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 CFR §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 CFR §122.41(e)].

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 CFR §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 CFR §122.5(c)].

## F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), United States Environmental Protection Agency (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 [40 CFR §122.41(i)] [CWC 13383(c)]:

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 [40 CFR §122.41(i)(1)];
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [40 CFR §122.41(i)(2)];
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [40 CFR §122.41(i)(3)];
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [40 CFR §122.41(i)(4)].

## G. Bypass

1. Definitions
  - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [40 CFR §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 CFR §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 and I.G.5 below [40 CFR §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 CFR §122.41(m)(4)(i)]:
  - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 CFR §122.41(m)(4)(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 CFR §122.41(m)(4)(B)]; and

- c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [40 CFR §122.41(m)(4)(C)].
4. 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 CFR §122.41(m)(4)(ii)].
5. Notice
  - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [40 CFR §122.41(m)(3)(i)].
  - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [40 CFR §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 CFR §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 paragraph H.2 of this section 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 CFR §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 CFR §122.41(n)(3)]:
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 CFR §122.41(n)(3)(i)];
  - b. The permitted facility was, at the time, being properly operated [40 CFR §122.41(n)(3)(ii)];
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [40 CFR §122.41(n)(3)(iii)]; and

- d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 CFR §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 CFR §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 CFR §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 CFR §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 CWC [40 CFR §122.41(l)(3)] [40 CFR §122.61].

## III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR §122.41(j)(1)].
- B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [40 CFR §122.41(j)(4)] [40 CFR §122.44(i)(1)(iv)].

## IV. STANDARD PROVISIONS – RECORDS

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

**B. Records of monitoring information shall include:**

1. The date, exact place, and time of sampling or measurements [40 CFR §122.41(j)(3)(i)];
2. The individual(s) who performed the sampling or measurements [40 CFR §122.41(j)(3)(ii)];
3. The date(s) analyses were performed [40 CFR §122.41(j)(3)(iii)];
4. The individual(s) who performed the analyses [40 CFR §122.41(j)(3)(iv)];
5. The analytical techniques or methods used [40 CFR §122.41(j)(3)(v)]; and
6. The results of such analyses [40 CFR §122.41(j)(3)(vi)].

**C. Claims of confidentiality for the following information will be denied [40 CFR §122.7(b)]:**

1. The name and address of any permit applicant or Discharger [40 CFR §122.7(b)(1)]; and
2. Permit applications and attachments, permits and effluent data [40 CFR §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 [40 CFR §122.41(h)] [CWC 13267].

**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 paragraph (2.) and (3.) of this provision [40 CFR §122.41(k)].
2. All permit applications shall be signed as follows:
  - a. For a corporation: 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 CFR §122.22(a)(1)];
- b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [40 CFR §122.22(a)(2)]; or
  - c. For a municipality, State, federal, or other public agency: 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 CFR §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 paragraph (b) of this provision, 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 paragraph (2.) of this provision [40 CFR §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 CFR §122.22(b)(2)]; and
  - c. The written authorization is submitted to the Regional Water Board, State Water Board, or U.S. EPA [40 CFR §122.22(b)(3)].
4. If an authorization under paragraph (3.) of this provision 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 paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board or U.S. EPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].
5. Any person signing a document under paragraph (2.) or (3.) of this provision 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 CFR §122.22(d)].

### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [40 CFR §122.41(l)(4)].
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [40 CFR §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 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 CFR §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 CFR §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 CFR §122.41(l)(5)].

### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR §122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR §122.41(l)(6)(ii)]:
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(A)].
  - b. Any upset that exceeds any effluent limitation in this Order [40 CFR §122.41(l)(6)(ii)(B)].

- c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [40 CFR §122.41(l)(6)(ii)(C)].
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 CFR §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 CFR §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 CFR §122.29(b) [40 CFR §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 which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [40 CFR §122.41(l)(1)(ii)].
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [40 CFR §122.41(l)(1)(iii)].

#### **G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [40 CFR §122.41(l)(2)].

#### **H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [40 CFR §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 CFR §122.41(l)(8)].

## VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [40 CFR §122.41(a)(2)] [CWC 13385 and 13387].
- B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 CFR §122.41(a)(3)].
- C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR §122.41(j)(5)].
- D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon

conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR §122.41(k)(2)].

## 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 CFR §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 CFR §122.42(a)(1)]:
  - a. 100 micrograms per liter ( $\mu\text{g/L}$ ) [40 CFR §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 CFR §122.42(a)(1)(ii)];
  - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(1)(iii)]; or
  - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [40 CFR §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 CFR §122.42(a)(2)]:
  - a. 500 micrograms per liter ( $\mu\text{g/L}$ ) [40 CFR §122.42(a)(2)(i)];
  - b. 1 milligram per liter (mg/L) for antimony [40 CFR §122.42(a)(2)(ii)];
  - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 CFR §122.42(a)(2)(iii)]; or
  - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [40 CFR §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 CFR §122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [40 CFR §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 the Order [40 CFR §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 CFR §122.42(b)(3)].

**Attachment E – Monitoring and Reporting Program**

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**ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify monitoring and reporting requirements. CWC Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements which implement the federal and State regulations.

**I. GENERAL MONITORING PROVISIONS**

- A. The Discharger shall comply with the MRP for this Order as adopted by the Regional Water Board, and with the Self-Monitoring Program, Part A, adopted August 1993 (SMP). The MRP and SMP may be amended by the Executive Officer pursuant to U.S. EPA regulations 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and SMP, the MRP prevails.
- B. Sampling is required during the entire year when discharging. All analyses shall be conducted using current U.S. EPA methods, or that have been approved by the U.S. EPA Regional Administrator pursuant to 40 CFR 136.4 and 40 CFR 136.5, or equivalent methods that are commercially and reasonably available, and that provide quantification of sampling parameters and constituents sufficient to evaluate compliance with applicable effluent limits. Equivalent methods must be more sensitive than those specified in 40 CFR 136, must be specified in the permit, and must be approved for use by the Executive Officer, following consultation with the State Water Quality Control Board's Quality Assurance Program. The Regional Water Board will find the Discharger in violation of the limitation if the discharge concentration exceeds the effluent limitation and the Reporting Level for the analysis for that constituent.
- C. Sampling and analysis of additional constituents is required pursuant to Table 1 of the Regional Water Board's August 6, 2001 Letter titled Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy.
- D. *Minimum Levels.* For compliance and reasonable potential monitoring, analyses shall be conducted using the commercially available and reasonably achievable detection levels which are lower than the WQOs/WQC or the effluent limitations, whichever are lower. The objective is to provide quantification of constituents sufficient to allow evaluation of observed concentrations with respect to the Minimum Levels given below. All Minimum Levels are expressed as µg/L.

The following table lists the test method the Discharger may use for compliance and reasonable potential monitoring for the pollutants with effluent limits.

**Table E-1. Test Methods for Toxic Pollutants**

CTR #	Constituent	Minimum Levels for Types of Analytical Methods [a]						
		GFAA	ICP	ICPMS	SPGFAA	CVAFS	COLOR	GC
6	Copper	5	10	0.5	2			

CTR #	Constituent	Minimum Levels for Types of Analytical Methods [a]						
		GFAA	ICP	ICPMS	SPGFAA	CVAFS	COLOR	GC
13	Zinc			1	5			
14	Cyanide						5	

[a] Laboratory techniques are defined as follows:

- GFAA = Graphite Furnace Atomic Absorption
- ICP = Inductively Coupled Plasma
- ICPMS = Inductively Coupled Plasma/Mass Spectrometry
- SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption
- CVAF = Cold Vapor Atomic Fluorescence Spectrometry
- COLOR = Colorimetric
- GC = Gas Chromatography

## 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-2. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.
001	E-001	At a point in the outfall from the treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present.
--	P-1 thru P-n	Locations on the site of the POTW at corners and midpoints of the perimeter fence line surrounding the treatment facilities (a sketch showing locations of these monitoring stations shall accompany each report of monitoring results).
--	O-1 thru O-n	Points in the collection system including manholes, pump stations, or any other locations where overflows or by passes occur.

## III. INFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location A-001

- The Discharger is unable to conduct influent sampling, therefore influent monitoring requirements are deferred until improvements are made to the treatment plant. When the Discharger upgrades the treatment plant, as required by Provision 10, the Discharger shall monitor influent to the facility at A-001 as follows:

**Table E-3. Influent Monitoring**

Parameter	Units	Sample Type <sup>[1]</sup>	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate <sup>[2][3]</sup>	gpd	Continuous	Daily	As specified at 40 CFR 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants)
BOD, 5-day, 20°C <sup>[3]</sup>	mg/L & kg/day	24-hr composite	Quarterly	
Total Suspended Solids <sup>[3]</sup>	mg/L & kg/day	24-hr composite	Quarterly	

Footnotes:

- [1] Composite sampling: 24-hour composites may be made up of discrete grabs collected over the course of a day and volumetrically or mathematically flow-weighted. Samples for inorganic pollutants may be combined prior to analysis. Samples for organic pollutants should be analyzed separately. If only one grab sample will be collected, it should be collected during periods of maximum peak flows. Samples shall be taken on random days.
- [2] Flow monitoring: Influent and Effluent flow shall be measured continuously, recorded, and reported daily. For effluent flows, the following information shall also be reported, monthly:
- Daily: Daily Flow (gallons)
  - Monthly: Average Daily Flow (gpd)
  - Monthly: Maximum Daily Flow (gpd)
  - Monthly: Minimum Daily Flow (gpd)
  - Monthly: Total Flow Volume (gallons)
- [3] The Discharger is unable to monitor the influent; therefore, these monitoring requirements are deferred until improvements are made to the treatment plant. Upon completion of upgrades to the treatment plant on March 30, 2008, as required by Provision 10, the Discharger shall commence monitoring for these constituents in accordance with the specified frequencies to ensure compliance with the permit.

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location E-001

1. The Discharger shall monitor treated effluent at E-001, as follows:

**Table E-4. Effluent Monitoring**

Parameter	Units	Sample Type <sup>[1] [2]</sup>	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate <sup>[3] [10]</sup>	gpd	Continuous	Daily	As specified at 40 CFR 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants)
BOD, 5-day, 20 °C, <sup>[4]</sup>	mg/L & kg/day	24-hr Composite	Quarterly	
Oil & Grease <sup>[5]</sup>	mg/L & kg/day	Grab	Annually	
Chlorine Residual & Dosage <sup>[6] [10]</sup>	mg/L & kg/day	Continuous	5 days/week	
Total Suspended Solids <sup>[4]</sup>	mg/L & kg/day	24-hr Composite	Quarterly	
pH	Standard unit	Grab	monthly	
Dissolved Oxygen	mg/L	Grab	Monthly	
Temperature	° C	Grab	Monthly	
Total Coliform Bacteria <sup>[10]</sup>	MPN/100mL	Grab	Quarterly	
Acute Toxicity, 96-hr <sup>[7]</sup>	% survival	24-hr Composite	Annually	
Copper	µg/L & kg/month	24-hr Composite	Quarterly	
Zinc	µg/L & kg/month	24-hr Composite	Quarterly	
Cyanide	µg/L	Grab	Quarterly	
2,3,7,8 TCDD & congeners <sup>[8]</sup>	µg/L	Grab	Once during term	
Table 1 selected constituents <sup>[9]</sup>	misc.	Misc.	Once during term	

Footnotes:

- [1] Composite sampling: 24-hour composites may be made up of discrete grabs collected over the course of a day and volumetrically or mathematically flow-weighted. Samples for inorganic pollutants may be combined prior to analysis. Samples for organic pollutants should be analyzed

separately. If only one grab sample will be collected, it should be collected during periods of maximum peak flows. Samples shall be taken on random days.

- [2] Grab samples shall be collected coincident with composite samples collected for the analysis of regulated parameters.
- [3] The Flow monitoring: Influent and Effluent flow shall be measured continuously and recorded and reported daily. For effluent flows, the following information shall also be reported, monthly:
  - Daily: Daily Flow (gallons)
  - Monthly: Average Daily Flow (gpd)
  - Monthly: Maximum Daily Flow (gpd)
  - Monthly: Minimum Daily Flow (gpd)
  - Monthly: Total Flow Volume (gallons)
- [4] The percent removal for BOD and TSS shall be reported for each quarter in accordance with Effluent Limitation A.2.
- [5] Oil and grease: Each oil and grease sampling event shall consist of a composite sample composed of three grab samples taken at equal intervals during the sampling date, with each grab sample being collected in a glass container. Each glass container used for sample collection or mixing shall be thoroughly rinsed with solvent rinsings as soon as possible after use, and the solvent rinsings shall be added to the composite sample for extraction and analysis.
- [6] Chlorine residual: The dechlorinated effluent shall be monitored continuously or, at a minimum, once every day. Report, on a daily basis, both maximum and minimum concentrations, for samples taken both prior to and following dechlorination. If a violation is detected, the maximum and average concentrations and duration of each non-zero residual event shall be reported, along with the cause and corrective actions taken. Total chlorine dosage (gal/day) shall be recorded on a daily basis.
- [7] Bioassays: Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the parameters specified in the U.S. EPA-approved method, such as pH, dissolved oxygen, ammonia nitrogen, and temperature. These results shall be reported. If the fish survival rate in the effluent is less than 70 percent or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue as soon as practicable until compliance is demonstrated. The Discharger may continue using static-renewal procedures as allowed by the regulations.
- [8] Chlorinated dibenzodioxins and chlorinated dibenzofurans shall be analyzed using the latest version of U.S. EPA Method 1613; the analysis shall be capable of achieving one-half of the U.S EPA MLs and the Discharger shall collect 4-liter samples to lower the detection limits to the greatest extent practicable. At a minimum, the Discharger is required to monitor once for the life of this permit. Alternative methods of analysis must be approved by the Executive Officer.
- [9] Sampling for Table 1 Selected Constituents in the SIP is addressed in a letter dated August 6, 2001, from Regional Water Board Staff: "Requirements for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy" (not attached, but available for review or download on the Regional Water Board's website at [www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay)).
- [10] The Discharger is unable to monitor the following constituents: flow, chlorine residual, and total coliform, therefore these monitoring requirements are deferred until improvements are made to the treatment plant. Upon completion of upgrades to the treatment plant on March 30, 2008, as required by Provision 10, the Discharger shall commence monitoring for these constituents in accordance with the specified frequencies to ensure compliance with the permit.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Whole Effluent Acute Toxicity

Compliance with whole acute toxicity requirements of this Order shall be achieved in accordance with the following:

1. Acute toxicity of effluent limits shall be evaluated by measuring survival of test organisms exposed to 96-hour static renewal through bioassays.
2. The following test species must be used: fathead minnow (*Pimephales promelas*).
3. All bioassays shall be performed according to 40 CFR 136, currently the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," 5th Edition. Exceptions may be granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP.)
4. If specific identifiable substances in the discharge can be demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the acute toxicity limit may be determined after the test samples are adjusted to remove the influence of those substances. Written approval from the Executive Officer must be obtained to authorize such an adjustment.
5. Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, dissolved oxygen, ammonia (if toxicity is observed), temperature, hardness, and alkalinity. These results shall be reported. If a violation of acute toxicity requirements occurs or if the control fish survival rate is less than 90 percent, the bioassay test shall be restarted with new batches of fish and shall continue back to back until compliance is demonstrated.

B. Whole Effluent Chronic Toxicity

N/A

**VI. LAND DISCHARGE MONITORING REQUIREMENT**

N/A

**VII. RECLAMATION MONITORING REQUIREMENTS**

N/A

**VIII. RECEIVING WATER MONITORING REQUIREMENTS—SURFACE WATER AND GROUNDWATER**

N/A

**IX. OTHER MONITORING REQUIREMENTS**

N/A

## **X. REPORTING REQUIREMENTS**

### **A. General Monitoring and Reporting Requirements**

1. The Discharger shall comply with all Standard Provisions (Attachment D and G) related to monitoring, reporting, and recordkeeping, except as otherwise specified below.
2. One time each week, the Discharger shall make visual observations at the corners and midpoints of the perimeter fence line surrounding the treatment facilities and record standard observations regarding runoff and runoff and general site conditions that may impact stormwater collection and diversion to the wastewater treatment facility as well as conditions that could impact the quality of effluent discharged from the facility. Observations shall be recorded and routinely reported in Self Monitoring Reports (SMRs). As described in Section II of this MRP, these "land monitoring locations" shall be identified as location Nos. P-1, P-2, P-3, etc. and shall be described on a sketch that accompanies SMRs.

### **B. Modifications to Part A of Self-Monitoring Program (Attachment G)**

Modify Section F.4 as follows:

#### **Self-Monitoring Reports**

[Add the following to the beginning of the first paragraph]

For each calendar month, a self-monitoring report (SMR) shall be submitted to the Regional Water Board in accordance with the requirements listed in Self-Monitoring Program, Part A. The purpose of the report is to document treatment performance, effluent quality and compliance with waste discharge requirements prescribed by this Order, as demonstrated by the monitoring program data and the Discharger's operation practices.

[And add at the end of Section F.4 the following:]

- g. If the Discharger wishes to invalidate any measurement, the letter of transmittal will include a formal request to invalidate the measurement; the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports the 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. The invalidation of a measurement requires the approval of

Regional Water Board staff and will be based solely on the documentation submitted at that time.

**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 the process approved by the Executive Officer in a letter dated December 17, 1999, Official Implementation of Electronic Reporting System (ERS) and in the Progress Report letter dated December 17, 2000, or in a subsequently approved format that the Permit has been modified to include.
- 2) **Monthly or Quarterly Reporting Requirements:** For each reporting period (monthly or quarterly as specified in SMP Part B), an electronic SMR shall be submitted to the Regional Water Board in accordance with Section F.4.a-g. above. However, until USEPA approves the electronic signature or other signature technologies, Dischargers that are using the ERS must submit a hard copy of the original transmittal letter, an ERS printout of the data sheet, a violation report, and a receipt of the electronic transmittal.
- 3) **Annual Reporting Requirements:** Dischargers who have submitted data using the ERS for at least one calendar year are exempt from submitting an annual report electronically, but a hard copy of the annual report shall be submitted according to Section F.5 below.

**C. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.
2. The Discharger shall submit quarterly Self Monitoring Reports (SMRs) including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. Quarterly SMRs shall be due 30 days after the end of each Quarter.
2. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-5. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	effective date of permit	All	30 days after the last day of each sampling quarter. <sup>(1)</sup>
Once / day	effective date of permit	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	30 days after the last day of each sampling quarter. <sup>(1)</sup>
Once / week	effective date of permit	Sunday through Saturday	30 days after the last day of each sampling quarter. <sup>(1)</sup>
Once / month	effective date of permit	1 <sup>st</sup> day of calendar month through last day of calendar month	30 days after the last day of each sampling quarter. <sup>(1)</sup>
Once / quarter	effective date of permit	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	April 30 July 30 October 30 January 30
Once / semi-annual period	effective date of permit	Wet Season: October 1 to April 30 Dry Season: May 1 to September 30	July 30 October 30
Once / year	effective date of permit	Dry Season: May 1 to September 30	October 30

<sup>(1)</sup> January 1 through March 31 – SMR Due Date: April 30  
 April 1 through June 30 – SMR Due Date: July 30  
 July 1 through September 30 – SMR Due Date: October 30  
 October 1 through December 31 – SMR Due Date: January 30

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 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 the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words “Estimated Concentration” (may be shortened to “Est. Conc.”). 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 considered appropriate by the laboratory.

- 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 RL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. The Discharger shall not use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.
  6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
  7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

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

8. The Discharger has the option to submit all monitoring results in an electronic reporting format approved by the Executive Officer. The Electronic Reporting System (ERS) format includes, but is not limited to, a transmittal letter, summary of violation details and corrective actions, and transmittal receipt. If there are any discrepancies between the ERS requirements and the "hard copy" requirements listed in the MRP, then the approved ERS requirements supersede.

#### **D. Other Reports**

1. **Annual Reports.** By February 1<sup>st</sup> of each year, the Discharger shall submit an annual report to the Regional Water Board covering the previous calendar year. The report shall contain the items described in Part A of the SMP, Section F.5 (Attachment G).

**Attachment F – Fact Sheet**

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**ATTACHMENT F – FACT SHEET**

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

**I. PERMIT INFORMATION**

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	<b>2 215051001</b>
<b>Discharger</b>	<b>Seafirth Estates Company and Property Owners within the Seafirth Estates Subdivision</b>
<b>Name of Facility</b>	<b>Seafirth Estates Wastewater Treatment Plant and its sewage collection system</b>
<b>Facility Address</b>	<b>33 Seafirth Place</b>
	<b>Tiburon, CA 94920</b>
	<b>Marin County</b>
<b>Facility Contact, Title and Phone</b>	<b>Bonner Buehler, Plant Operator, 415-388-1345</b>
<b>Authorized Person to Sign and Submit Reports</b>	<b>Bonner Buehler, Plant Operator, 415-388-1345</b>
<b>Mailing Address</b>	<b>33 Seafirth Place, Tiburon, CA 94920</b>
<b>Billing Address</b>	<b>Same</b>
<b>Type of Facility</b>	<b>POTW</b>
<b>Major or Minor Facility</b>	<b>Minor</b>
<b>Threat to Water Quality</b>	<b>3</b>
<b>Complexity</b>	<b>B4</b>
<b>Pretreatment Program</b>	<b>N</b>
<b>Reclamation Requirements</b>	<b>N</b>
<b>Facility Permitted Flow</b>	<b>7,500 gallons per day (GPD)</b>
<b>Facility Design Flow</b>	<b>7,500 GPD</b>
<b>Watershed</b>	<b>San Francisco Bay</b>
<b>Receiving Water</b>	<b>Central San Francisco Bay</b>
<b>Receiving Water Type</b>	<b>Marine</b>

- A. The Seafirth Estates Company and property owners within the Seafirth Estates Subdivision (hereinafter the Discharger) are the owners of the Seafirth Estates Wastewater Treatment Plant (WWTP), a POTW.
- B. The Facility discharges wastewater to Central San Francisco Bay, a water of the United States, and is currently regulated by Order 96-152 and NPDES Permit No. CA0038893, which was adopted on

automatically continued in effect after the permit expiration date. The NPDES Permit Number was modified from CA0038393 to CA0038893, for consistency with current Regional Water Board records (e.g., CIWQS).

- C. The Discharger filed a Report of Waste Discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on March 15, 2001.

**II. FACILITY DESCRIPTION**

The Discharger operates a municipal WWTP that serves approximately 30 single-family homes in the Seafirth Estates subdivision, located on the Tiburon Peninsula off Paradise Road about three miles north of the town of Tiburon in Marin County. The subdivision is in the Tiburon town limits but outside the boundaries of nearby sanitary districts. The company is governed and financed by the property owners. The WWTP has a dry weather design flow capacity of 7,500 gallons per day (gpd) and presently discharges an average dry weather flow of 4,500 gpd to San Francisco Bay. The sewage collection system consists of about 2,500 feet of pipe that conveys the sewage by gravity to the treatment plant.

**A. Description of Wastewater and Sludge Treatment or Controls**

The WWTP consists of primary sedimentation, biological treatment using a trickling filter, followed by secondary clarification, chlorination and dechlorination. The WWTP does not have a chlorine contact chamber. A tube runs into the effluent as it leaves the 2<sup>o</sup> clarifier. Chlorine (hypochlorite) is injected into the tube, chlorinating the effluent. The chlorinated effluent enters the discharge outfall. Another tube runs into the discharge outfall. This tube injects a dechlorination agent (sodium bisulfide). The discharge outfall acts as the "contact chamber". The Discharger assumes there is adequate contact time for dechlorination to occur before the effluent enters the Bay. Wastewater solids are stored in a storage tank and are periodically hauled to the Sewage Agency of Southern Marin for treatment and disposal.

**B. Discharge Points and Receiving Waters**

- 1. **Discharge Point 001.** Discharge to the Central San Francisco Bay occurs through a submerged outfall approximately 100 feet offshore, at a depth of between 7 feet and 10 feet below the water surface at 37°, 54', 08" N. Latitude and 122°, 28', 08" W. Longitude. This Discharge is classified by the Regional Water Board as a deepwater discharge. The location of the Seafirth Estates outfall and its receiving water are shown in Table F-2 below.

**Table F-2. Outfall Location**

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
E-001	POTW Effluent	37°, 54', 08" N	122°, 28', 08" W	Central San Francisco Bay

The Central San Francisco Bay is located in the Central Bay Basin watershed management area, between the Richmond-San Rafael Bridge and the San Francisco-Oakland Bay Bridge.

- 2. **Storm Water Discharges.**

- a. **Regulations.** Regulations applicable to storm water discharges were promulgated by the U.S. EPA on November 19, 1990. The regulations (40 CFR Parts 122 – 124) require specific categories of industrial activity (industrial storm water) to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial storm water discharges.
- b. **Exemption from Coverage under Statewide Storm Water General Permit.** The State Water Resources Control Board's (the State Board's) statewide NPDES permit for storm water discharges associated with industrial activities (NPDES General Permit CAS000001- the General Permit) was adopted on November 19, 1991, amended on September 17, 1992, and reissued on April 17, 1997. The Discharger is not required to be covered under the General Permit as all storm water flows into the headworks of the facility, and is treated along with the wastewater discharge from the facility.
- c. **Exemption from Coverage under Statewide Sanitary Sewer Overflow Waste Discharge Requirement.** The State Board on May 2, 2006, adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ. The Discharger's collection system is less than 1 mile, and is thus exempt from the requirements of 2006-0003-DWQ. However, the Discharger's collection system is part of the treatment works and is subject to the requirements of this permit.

**C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data**

Effluent limitations contained in the previous permit (Order No. 96-152 for discharges from Monitoring Location E-001) and representative monitoring data from the term of the previous Order are as follows:

**Table F-3. Historic Effluent Limitations and Monitoring Data**

Parameter, units	Effluent Limitation			Monitoring Data	
	Average Monthly	Average Weekly	Maximum Daily	Average	Range
Flow, average dry weather flow	7,500 mgd			N/A <sup>[4]</sup>	N/A
pH, standard units	6.0 – 9.0			7	6.9 – 7.1
BOD <sub>5</sub> , mg/L	30	45	60	22 <sup>[3]</sup>	20-24
Percent Removal, BOD <sub>5</sub>	85 percent			N/A <sup>[4]</sup>	
TSS, mg/L	30	45	60	22	20-24
Percent Removal, TSS	85 percent			N/A <sup>[4]</sup>	
Settleable Solids, ml/L	0.1		0.2 <sup>[1]</sup>	0.01	0.01
Dissolved Oxygen, mg/L	no limit			5.2	3.6 – 7.5
Oil and Grease, mg/L	10		20	N/A	
Total Residual Chlorine			0.0 <sup>[1]</sup>	N/A <sup>[4]</sup>	
Total Coliform Bacteria	MPN ≤240/100 mL for any five consecutive samples, and MPN ≤10,000 MPN/100 mL for any single sample			N/A <sup>[4]</sup>	
Acute Toxicity, % Survival	no limit			N/A	
Antimony, µg/L <sup>[3]</sup>	no limit			0.28 <sup>[2]</sup>	0.03 – 0.4

Parameter, units	Effluent Limitation			Monitoring Data	
	Average Monthly	Average Weekly	Maximum Daily	Average	Range
Arsenic, µg/L <sup>[3]</sup>	no limit			1.01	0.4 – 1.7
Beryllium, µg/L <sup>[3]</sup>	no limit			all ND	< 0.06
Cadmium, µg/L <sup>[3]</sup>	no limit			0.17	0.04 – 0.3
Chromium III, µg/L <sup>[3]</sup>	no limit			N/A	
Chromium VI, µg/L <sup>[3]</sup>	no limit			1.41	0.6 - 2.4
Copper, µg/L <sup>[3]</sup>	no limit			19.04	9.3 – 23
Lead, µg/L <sup>[3]</sup>	no limit			0.65	0.43 – 1.2
Mercury, µg/L <sup>[3]</sup>	no limit			N/A	
Nickel, µg/L <sup>[3]</sup>	no limit			3.91	3.1 – 5.1
Selenium, µg/L <sup>[3]</sup>	no limit			0.41 <sup>[2]</sup>	< 0.3 – 0.7
Silver, µg/L <sup>[3]</sup>	no limit			0.14 <sup>[2]</sup>	< 0.02 – 0.3
Thallium, µg/L <sup>[3]</sup>	no limit			0.03 <sup>[2]</sup>	< 0.03 – 0.3
Zinc, µg/L <sup>[3]</sup>	no limit			94.6	55 – 130
Cyanide, µg/L	no limit			N/A	

[1] Limitation is an instantaneous maximum limitation.

[2] Average was calculated with the non-detected values being replaced with half detection limit.

[3] Data for metals was generated in 8 monitoring events between February 2002 and November 2003

[4] Discharger cannot sample for parameters, a provision in this Order requires plant modifications to facilitate monitoring.

#### D. Compliance Summary

- 1. Compliance with Numeric Effluent Limits.** The Discharger was not able to meet all monitoring requirements of Order No. 92-033 to demonstrate compliance with effluent limitations, and therefore, the Regional Water Board has not fully determined compliance with all effluent limitations.
- 2. Compliance with Permit Provisions.** The Discharger complied with all provisions of Order No. 96-152.
- 3. Compliance with Submittal of Self-Monitoring Reports.** The Dischargers submitted all Self-Monitoring Reports on or before the due date during the term of Order No. 96-152.

#### E. Planned Changes

The Discharger is required to make treatment plant modifications to comply with Provision VI. C. 11 of this Order.

### III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

#### A. Legal Authorities

This Order is issued pursuant to CWA Section 402 and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and CWC Chapter 5.5, Division 7. It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

**B. California Environmental Quality Act (CEQA)**

This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with CWC Section 13389.

**C. State and Federal Regulations, Policies, and Plans**

- 1. Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the San Francisco Bay Basin (Region 2)* (hereinafter Basin Plan) that designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to Central San Francisco Bay are as follows:

**Table F-4. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Central San Francisco Bay	Water contact recreation (REC-1); non-contact water recreation (REC-2); commercial and sport fishing (COMM); wildlife habitat (WILD); preservation of habitat for rare and endangered species (RARE); estuarine habitat (EST); fish migration and spawning (MIGR, SPWN); shellfish harvesting (SHELL); navigation (NAV); industrial process and service supply (IND, PROC).

- 2. Thermal Plan.** The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972 and amended this plan on September 18, 1975. This plan contains WQOs for coastal and interstate surface waters as well as enclosed bays and estuaries.
- 3. National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria (WQC) for priority pollutants and are applicable to this discharge.
- 4. State Implementation Policy.** On March 2, 2000, 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 U.S. EPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate

test procedures for individual discharges that have been approved by U.S. EPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the U.S. EPA through the California Toxics Rule. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

5. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). 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.
6. **Stringency of Requirements for Individual Pollutants.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal CWA. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), oil and grease (O&G), and pH. Restrictions on these pollutants are specified in federal regulations and are no more stringent than required by the CWA. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives 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 purposes of the CWA" pursuant to 40 CFR 131.21 (c) (1). The remaining water quality objectives and beneficial uses implemented by this Order [arsenic, cadmium, chromium (VI), copper (fresh water), lead, nickel, silver (1-hour), and zinc] were approved by USEPA on January 5, 2005, and are applicable water quality standards pursuant to 40 CFR 131.21 (c) (2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.
7. **Antidegradation Policy.** 40 CFR 131.12 requires 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 68-16, which incorporates the requirements of the Federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. The permitted discharge is consistent with the antidegradation provision of

40 CFR 131.12 and State Water Board Resolution 68-16, and the final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further water quality degradation.

- 8. Anti-Backsliding Requirements.** CWA Sections 402 (o) (2) and 303 (d) (4) and 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This Order is consistent with all applicable anti-backsliding requirements of the CWA, as well as federal and State regulations.
- 9. Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, included as Attachment E to this Order, establishes monitoring and reporting requirements to implement federal and State requirements.
- 10. Standard and Special Provisions.** Standard Provisions, which must be included in every NPDES permit and apply to all NPDES discharges, in accordance with 40 CFR 122.41 and 122.42, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger (Attachment G). A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).
- 11. 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 notification are provided in the Fact Sheet (Attachment F) of this Order.
- 12. 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) of this Order.

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

On June 6, 2003, the U.S. EPA approved a revised list of impaired water bodies prepared by the State [hereinafter referred to as the 303(d) list], prepared pursuant to provisions of CWA Section 303, which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Central San Francisco Bay is listed as an impaired water body. The pollutants impairing Central San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, PCBs (dioxin-like), and selenium. The SIP requires final effluent limitations for all 303 (d)-listed pollutants to be based on total maximum daily loads and associated waste load allocations.

- 1. Total Maximum Daily Loads.** The Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303 (d) list in Central San Francisco Bay within

the next ten years. Future review of the 303 (d)-list for Central San Francisco Bay may result in revision of the schedules or provide schedules for other pollutants.

2. **Waste Load Allocations.** The TMDLs will establish waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, and will result in achieving the water quality standards for the waterbodies. Final WQBELs for 303 (d)-listed pollutants in this discharge will be based on WLAs contained in the respective TMDLs.
3. **Implementation Strategy.** The Regional Water Board's strategy to collect water quality data and to develop TMDLs is summarized below:
  - a. **Data Collection.** The Regional Water Board has given the dischargers the option to collectively assist in developing and implementing analytical techniques capable of detecting 303 (d)-listed pollutants to at least their respective levels of concern or WQOs/WQC. This collective effort may include development of sample concentration techniques for approval by the U.S. EPA. The Regional Water Board will require dischargers to characterize the pollutant loads from their facilities into the water-quality limited waterbodies. The results will be used in the development of TMDLs, and may be used to update or revise the 303 (d) list or change the WQOs/WQC for the impaired waterbodies including Central San Francisco Bay.
  - b. **Funding Mechanism.** The Regional Water Board has received, and anticipates continuing to receive, resources from Federal and State agencies for TMDL development. To ensure timely development of TMDLs, the Regional Water Board intends to supplement these resources by allocating development costs among dischargers through the RMP or other appropriate funding mechanisms.

#### IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the 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 CFR 122.44 (a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44 (d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, three options exist to protect water quality: 1) 40 CFR 122.44 (d) specifies that WQBELs may be established using U.S. EPA criteria guidance under CWA section 304 (a); 2) proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information may be used; or 3) an indicator parameter may be established.

Several specific factors affecting the development of limitations and requirements in this Order are discussed as follows:

## **A. Discharge Prohibitions**

1. Prohibition III.A (No discharge other than described in this order). This prohibition is similar to the previous permit and is based on California Water Code (CWC) Section 13260 that requires filing of a ROWD before a permit to discharge can be granted. The Discharger submitted a ROWD, dated March 15, 2001, for permission to discharge as specified in this permit, and therefore, any discharges other than as described in this Order are prohibited.
2. Discharge Prohibition III.B. (average dry weather flow not to exceed 0.0075 mgd): This prohibition is retained from the previous permit and is meant to ensure that wastewater flows do not exceed the design capacities of the treatment facility.
3. Prohibition III.C. (no discharge receiving less than 10:1 dilution): This prohibition is based on the Basin Plan, and is from the previous permit.
4. Discharge Prohibition III.D (no bypass or overflow of untreated wastewaters): These prohibitions are based on the Basin Plan. The Basin Plan prohibits the discharge of partially treated and untreated wastes (Chapter 4, Discharge Prohibition No.15). This prohibition is based on general concepts contained in CWC Sections 13260 through 13264 that relate to the discharge of waste to State waters without filing for and being issued a permit. Under certain circumstances, as stated in 40 CFR 122.41 (m), the facilities may bypass waste streams to waters of the State in order to prevent loss of life, personal injury, or severe property damage, or if there were no feasible alternatives to the bypass and the Discharger submitted notices of the anticipated bypass to waters of the State.
5. Discharge Prohibition III.E (no sanitary sewer overflows (SSO) to waters of the United States): The Clean Water Act prohibits the discharge of wastewater to surface waters except as authorized under an NPDES permit. POTWs must achieve secondary treatment, at a minimum, and any more stringent limitations that are necessary to achieve water quality standards. (33 U.S.C §1311 (b)(1)(B) and (C).) Thus, an SSO that results in the discharge of raw sewage, or sewage not meeting secondary treatment, to surface waters is prohibited by the Clean Water Act.

## **B. Technology-Based Effluent Limitations**

NPDES regulations at 40 CFR 122.44 (a) require that permits include applicable technology-based limitations and standards. This Order includes such limitations based on the minimum level of effluent quality attainable by secondary treatment, as established at 40 CFR 133. This Secondary Treatment Regulation includes requirements for BOD<sub>5</sub>, suspended solids, and pH. The Regional Water Board, in Table 4-2 of the Basin Plan, has supplemented these technology based requirements with additional requirements for conventional pollutants (total coliform bacteria, settleable matter, oil and grease, and total residual chlorine), which are applicable to the Seafirth Estates Wastewater Treatment Facility. This Order, therefore, includes effluent limitations for BOD<sub>5</sub>, suspended solids, pH, total coliform bacteria, oil and grease, and chlorine, which reflect the applicable technology based requirements of 40 CFR 133 and the applicable requirements for conventional pollutants established by Table 4-2 of the Basin Plan. All effluent limitations for these constituents are the same as in the previous permit, with one exception being that limitations for settleable solids have not been retained by this Order. For this WWTP, like other facilities

achieving secondary or more advanced levels of treatment, the Regional Water Board has determined that compliance with the requirements of 40 CFR 133 and of Table 4-2 of the Basin Plan will likewise assure removal of settleable solids to acceptably low levels - below 0.1 ml/L/hr (30 day average) and 0.2 ml/L/hr (daily maximum).

## 1. Scope and Authority

NPDES regulations at 40 CFR 125.3 (a) (1) require that technology-based effluent limitations for municipal dischargers, based on secondary treatment standards or equivalent-to-secondary treatment standards, be placed in NPDES permits for POTWs.

Pursuant to Section 301 (b) (1) (B) of the Clean Water Act U.S. EPA developed secondary treatment regulations, which are codified at 40 CFR 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment.

This Order establishes the following technology-based effluent limitations.

- a. **Biochemical Oxygen Demand.** Effluent limitations for BOD<sub>5</sub> of 30 mg/L (average monthly) and 45 mg/L (average weekly) are retained from the previous permit and reflect requirements of U.S. EPA's secondary treatment regulations at 40 CFR 133.102, as well as requirements established by Table 4-2 of the Basin Plan for conventional pollutants. A requirement for 85 percent BOD<sub>5</sub> removal has also been retained from the expiring permit and reflects requirements of U.S. EPA's secondary treatment regulations and requirements established by Table 4-2 of the Basin Plan.
- b. **Total Suspended Solids (TSS).** Effluent limitations for TSS of 30 mg/L (average monthly) and 45 mg/L (average weekly) are retained from the previous permit and reflect requirements of U.S. EPA's secondary treatment regulations at 40 CFR 133.102, as well as requirements established by Table 4-2 of the Basin Plan for conventional pollutants. A requirement for 85 percent TSS removal has also been retained from the expiring permit and reflects requirements of U.S. EPA's secondary treatment regulations and requirements established by Table 4-2 of the Basin Plan.
- c. **pH.** Effluent limitations requiring pH of effluent to be within the range of 6.0- 9.0 are retained from the previous permit and reflect requirements of U.S. EPA's secondary treatment regulations at 40 CFR 133.102, as well as requirements established by Table 4-2 of the Basin Plan for deep water discharges of conventional pollutants.
- d. **Oil and Grease.** Effluent limitations for oil and grease of 10 mg/L (average monthly) and 20 mg/L (maximum daily) are retained from the previous permit and reflect requirements established by Table 4-2 of the Basin Plan for discharges of conventional pollutants. These limitations are also typical requirements of secondary treatment.

## 2. Applicable Technology-Based Effluent Limitations

### Summary of Technology-Based Effluent Limitations Discharge Point E-001

#### a. Conventional Pollutants

**Table F-5. Summary of Technology-Based Limitations (001)**

Parameter	Units	Effluent Limitations			
		Average Monthly	Average Weekly	Max Daily	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	30	45	----	----
Total Suspended Solids	mg/L	30	45	----	----
Oil & Grease	mg/L	10	----	20	----

- b. Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and total suspended solids shall not be less than 85 percent.
- c. pH:** The pH of the discharge shall not exceed 9.0 nor be less than 6.0. If the Discharger employs continuous pH monitoring, the Discharger shall be in compliance with the pH limitation specified herein, provided that both of the following conditions are satisfied:
- (1) The total time during which the pH values are outside the required range shall not exceed 7 hours and 26 minutes in any calendar month.
  - (2) No individual excursion from the required range of pH values shall exceed 60 minutes.

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

**1. Scope and Authority.**

- a. As specified in 40 CFR 122.44 (d) (1) (i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard (Reasonable Potential). The process for determining Reasonable Potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other State plans and policies, or water quality criteria contained in the CTR and NTR.
- b. NPDES regulations and the SIP provide the basis to establish Maximum Daily Effluent Limitations (MDELs).

**(1) NPDES Regulations.** NPDES regulations at 40 CFR Part 122.45 (d) state:

“For continuous discharges all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall *unless impracticable* be stated as maximum daily and average monthly discharge limitations for all discharges other than publicly owned treatment works.”

**(2) SIP.** The SIP (page 8, Section 1.4) requires WQBELs be expressed as MDELs and average monthly effluent limitations (AMELs).

- c. MDELs are used in this Order to protect against acute water quality effects. The MDELs are necessary for preventing fish kills or mortality to aquatic organisms.

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

The WQC and WQOs applicable to the receiving waters for this discharge are from the Basin Plan, the U.S. EPA's May 18, 2000 Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California (the California Toxics Rule, or the CTR), and the U.S. EPA's National Toxics Rule (the NTR).

- a. **Basin Plan.** The Basin Plan specifies numeric WQOs for 10 priority toxic pollutants, as well as narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The pollutants for which the Basin Plan specifies numeric objectives are arsenic, cadmium, chromium (VI), copper in freshwater, lead, mercury, nickel, silver, zinc, and cyanide (see also c., below). The narrative toxicity objective states in part "[a]ll waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms." The bioaccumulation objective states in part "[c]ontrollable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in this Order are designed to implement these objectives, based on available information.
- b. **CTR.** The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries such as here, except that where the Basin Plan's Tables 3-3 and 3-4 specify numeric objectives for certain of these priority toxic pollutants, the Basin Plan's numeric objectives apply over the CTR (except in the South Bay south of the Dumbarton Bridge).
- c. **NTR.** The NTR established numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay upstream to, and including, Suisun Bay and the Delta. This includes the receiving water for this Discharger.
- d. **Technical Support Document for Water Quality-Based Toxics Controls.** Where numeric objectives have not been established or updated in the Basin Plan, NPDES regulations at 40 CFR Part 122.44 (d) require that WQBELs be established based on U.S. EPA criteria, supplemented where necessary by other relevant information, to attain and maintain narrative WQOs to fully protect designated beneficial uses.

To determine the need for and establish WQBELs, when necessary, the Regional Water Board staff has followed the requirements of applicable NPDES regulations, including 40 CFR Parts 122 and 131, as well as guidance and requirements established by the Basin Plan; U.S. EPA's Technical Support Document for Water Quality-Based Toxics Control (the TSD, EPA/505/2-90-001, 1991); and the State Water Resources Control Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (the SIP, 2005).

- e. **Basin Plan Receiving Water Salinity Policy.** The Basin Plan states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water shall be considered in determining the applicable WQC. Freshwater criteria shall apply to discharges to waters with salinities equal to or less than one ppt at least 95 percent of the time. Saltwater criteria shall apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally influenced freshwaters that support estuarine beneficial uses, the criteria shall be the lower of the salt or freshwater criteria, (the latter calculated based on ambient hardness), for each substance.
- (1) **Receiving Water Salinity.** The receiving water for the subject discharge is Central San Francisco Bay. Regional Water Board staff evaluated RMP salinity data from the three nearest receiving water stations: Richardson Bay, Point Isabel, and Yerba Buena Island, for the period February 1993 – August 2001. During that period, the receiving water's minimum salinity was 11.6 ppt, its maximum salinity was 31.6 ppt, and its average salinity was 23.5 ppt. These data are all well above the threshold for saltwater; and therefore, the reasonable potential analysis (RPA) and limitations in this Order are based on marine or saltwater WQOs/WQC.
- f. **CWA 303 (d) (Impaired) Waters.** On June 6, 2003, the U.S. EPA approved a revised list of impaired water bodies prepared by the State pursuant to CWA section 303(d) - specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. The pollutants impairing Central San Francisco Bay include chlordane, DDT, diazinon, dieldrin, dioxin compounds, exotic species, furan compounds, mercury, PCBs, dioxin-like PCBs, and selenium.
- g. **Dilution Credit.** Discharge from the Seafirth Estates wastewater treatment facility to the Central San Francisco Bay through a deep water discharge (see II. B.1, above).

Previous permits have granted the Discharger a 10:1 dilution credit. Also outfalls located 10 feet below the water surface generally do achieve at least 10:1 dilution. These factors taken together support the granting of dilution to the Discharger. Limiting the dilution credit is based on SIP provisions in Section 1.4.2. The following outlines the basis for limiting the dilution credit.

- (1) A far-field background station is appropriate because the receiving waterbody (Bay) is a very complex estuarine system with highly variable and seasonal upstream freshwater inflows and diurnal tidal saltwater inputs.
- (2) Due to the complex hydrology of the San Francisco Bay, a mixing zone cannot be accurately established.
- (3) Previous dilution studies do not fully account for the cumulative effects of other wastewater discharges to the system.
- (4) The SIP allows limiting a mixing zone and dilution credit for persistent pollutants (e.g., copper, silver, nickel and lead).

The main justification for limiting dilution credit is uncertainty in accurately determining ambient background and uncertainty in accurately determining the mixing zone in a complex estuarine system with multiple wastewater discharges. The basis for using 10:1 is that it was granted in the previous permit. This 10:1 limit is also based on the Basin Plan's prohibition number 1, which prohibits discharges less than 10:1. Since this discharge is required to achieve at least 10:1, it is appropriate to grant 10:1 at this time.

**h. Translators for Metals**

Because NPDES regulations at 40 CFR 122.45 (c) require effluent limitations for metals to be expressed as total recoverable metal, and applicable water quality criteria for the metals are typically expressed as dissolved metal, factors or translators must be used to convert metals concentrations from total recoverable to dissolved and vice versa. In the CTR, U.S. EPA establishes default translators which are used in NPDES permitting activities; however, site-specific conditions such as water temperature, pH, suspended solids, and organic carbon greatly impact the form of metal (dissolved, filterable, or otherwise) which is present and therefore available in the water to cause toxicity. In general, the dissolved form of the metals is more available and more toxic to aquatic life than filterable forms. Site-specific translators can be developed to account for site-specific conditions, thereby preventing exceedingly stringent or under protective water quality objectives.

For deep water discharges to the Central San Francisco Bay, the Regional Water Board staff use the following translators for copper and nickel, based on recommendations of the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2005). In determining the need for and calculating WQBELs for all other metals, the Regional Board staff has used translators established by the U.S. EPA in the CTR at 40 CFR 131.38 (b) (2) Table 2.

**Table F-6. Site-Specific Translators for Copper and Nickel**

Cu and Ni Translators for Deepwater Discharges to the Central Bay	Copper		Nickel	
	Chronic Translator	Acute Translator	Chronic Translator	Acute Translator
	0.74	0.88	0.65	0.85

**i. Interim Limitations and Compliance Schedules**

(1) Pursuant to Section 2.1.1 of the SIP, "the compliance schedule provisions for the development and adoption of a TMDL only apply when: (a) the Dischargers request and demonstrates that it is infeasible for the Dischargers to achieve immediate compliance with a CTR criterion; and (b) the Discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the Regional Water Board should consider the Discharger's contribution to current loadings and the Discharger's ability to participate in TMDL development." Regional Water Board staff performed an RPA and determined that no mercury effluent limitation (concentration or mass) is needed at this time. However, as part of the San Francisco Bay Mercury TMDL

implementation strategy, all wastewater treatment plants will receive a mercury mass limitation.

- (2) The SIP and the Basin Plan authorize compliance schedules in a permit if an existing Discharger cannot immediately comply with a new and more stringent effluent limitation. Compliance schedules for limitations derived from CTR WQC are based on Section 2.2 of the SIP, and compliance schedules for limitations derived from NTR and Basin Plan WQOs are based on the Basin Plan. Both the SIP and the Basin Plan require the Dischargers to demonstrate the infeasibility of achieving immediate compliance with the new limitation to qualify for a compliance schedule.

The SIP and Basin Plan require the following documentation to be submitted to the Regional Water Board to support a finding of infeasibility:

- (a) Descriptions of diligent efforts the Dischargers have made to quantify pollutant levels in the discharge, sources of the pollutant in the waste stream, and the results of those efforts.
- (b) Descriptions of source control and/or pollutant minimization efforts currently under way or completed.
- (c) A proposed schedule for additional or future source control measures, pollutant minimization, or waste treatment.
- (d) A demonstration that the proposed schedule is as short as practicable.

The Basin Plan provides for a 10-year compliance schedule to implement measures to comply with new standards as of the effective date of those standards. This provision applies to the objectives adopted in the 2004 Basin Plan Amendment. Additionally, the provision authorizes compliance schedules for new interpretations of other existing standards if the new interpretation results in more stringent limitations. This latter situation applies to NTR criteria and Basin Plan objectives in place prior to the SIP. Due to the adoption of the SIP, the Regional Water Board has newly interpreted these objectives and standards. The effective date of the new interpretation is the effective date of the SIP (April 28, 2000).

- (3) The Discharger has asserted that it is infeasible to immediately comply with the cyanide WQBELs, calculated according to SIP Section 1.4. The Regional Water Board concurs that it is infeasible to achieve immediate compliance for this pollutant.
- 4) The interim limitations for cyanide shall remain in effect until April 27, 2010, or until the Regional Water Board amends the limitation(s) based on site-specific objectives (SSOs).
- 5) This Order establishes a compliance schedule that extends beyond one year for cyanide. Pursuant to the SIP and 40 CFR 122.47, the Regional Water Board shall establish interim numeric limitations and interim requirements to control this pollutant. This Order establishes interim limitations for cyanide based on the previous permit limitation or existing performance, whichever is more stringent, and

assures that antibacksliding requirements are met. This Order also establishes interim requirements in a provision for development and/or improvement of a Pollution Minimization Program to reduce pollutant loadings to the plant, and for submittal of annual reports on this Program.

### 3. Determining the Need for WQBELs.

NPDES regulations at 40 CFR 122.44 (d) (1) (i) require permits to include WQBELs for all pollutants (non-priority or priority) "which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any narrative or numeric criteria within a State water quality standard" (have Reasonable Potential). Thus, assessing whether a pollutant has Reasonable Potential is the fundamental step in determining whether or not a WQBEL is required. For non-priority pollutants, Regional Water Board staff used available monitoring data, receiving water's designated uses, and/or previous permit pollutant limitations to determine Reasonable Potential as described in Sections 3.a. and 3.b. below. For priority pollutants, Regional Water Board staff used the methods prescribed in Section 1.3 of the SIP to determine if the discharge from Discharge Point 001 demonstrates Reasonable Potential as described below in sections 3.c – 3.h.

- a. **Reasonable Potential Analysis.** Using the methods prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed available effluent data, plus effluent data from the Paradise Cove WWTP (a nearby, similar facility) to determine if the discharge demonstrates Reasonable Potential. The Reasonable Potential Analysis (RPA) compares the effluent data with numeric and narrative WQOs in the Basin Plan and numeric WQC from the U.S. EPA, the NTR, and the CTR. The Basin Plan objectives and CTR criteria are shown in Appendix A of this Fact Sheet.
- b. **Reasonable Potential Methodology.** Using the methods and procedures prescribed in Section 1.3 of the SIP, Regional Water Board staff analyzed the effluent and background data and the nature of facility operations to determine if the discharge has reasonable potential to cause or contribute to exceedances of applicable SSOs or WQC. Appendix A of this Fact Sheet shows the stepwise process described in Section 1.3 of the SIP.

The RPA identifies the observed MEC in the effluent for each pollutant, based on effluent concentration data. There are three triggers in determining Reasonable Potential:

- (1) The first trigger is activated if the MEC is greater than the lowest applicable WQO ( $MEC \geq WQO$ ), which has been adjusted, if appropriate, for pH, hardness, and translator data. If the MEC is greater than the adjusted WQO, then that pollutant has reasonable potential, and a WQBEL is required.
- (2) The second trigger is activated if the observed maximum ambient background concentration (B) is greater than the adjusted WQO ( $B > WQO$ ), and the pollutant was detected in any of the effluent samples.
- (3) The third trigger is activated if a review of other information determines that a WQBEL is required to protect beneficial uses, even though both MEC and B are less

than the WQO/WQC. A limitation may be required under certain circumstances to protect beneficial uses.

- c. Effluent Data.** The Regional Water Board's August 6, 2001 letter titled *Requirement for Monitoring of Pollutants in Effluent and Receiving Water to Implement New Statewide Regulations and Policy* (hereinafter referred to as the Regional Water Board's August 6, 2001 Letter) to all permittees, formally required the Discharger (pursuant to CWC Section 13267) to initiate or continue to monitor for the priority pollutants using analytical methods that provide the best detection limits reasonably feasible. Regional Water Board staff analyzed these effluent data to determine if the discharge has Reasonable Potential. The RPA for this permit was based on the effluent monitoring data for twelve metals collected in eight sampling events between February 2002 and November 2003. Because this data for toxic pollutants was limited, it was supplemented with effluent data from Sanitary District No. 5, Paradise Cove WWTP, which was generated in three sampling events between March and October 2002. The Paradise Cove WWTP is a nearby similar facility, which also serves a small residential community.
- d. Ambient Background Data.** Ambient background values are used in the reasonable potential analysis (RPA) and in the calculation of effluent limitations. For the RPA, ambient background concentrations are the observed maximum detected water column concentrations. The SIP states that for calculating WQBELs, ambient background concentrations are either the observed maximum ambient water column concentrations or, for criteria/objectives intended to protect human health from carcinogenic effects, the arithmetic mean of observed ambient water concentrations. The RMP station at Yerba Buena Island, located in the Central Bay, has been sampled for most of the inorganic (CTR constituent numbers 1-15) and some of the organic (CTR constituent numbers 16-126) toxic pollutants. Not all the constituents listed in the CTR were analyzed by the RMP during this time.

These data gaps are addressed by the Regional Water Board's August 6, 2001 Letter, which is available online (see Standard Language and Other References Available Online, below). The Regional Water Board's August 6, 2001 Letter formally requires the Discharger (pursuant to CWC Section 13267) to conduct ambient background monitoring and effluent monitoring for those constituents not currently sampled by the RMP and to provide this technical information to the Regional Water Board.

On May 15, 2003, a group of several San Francisco Bay Region Dischargers (known as the Bay Area Clean Water Agencies, or BACWA) submitted a collaborative receiving water study, entitled the *San Francisco Bay Ambient Water Monitoring Interim Report*. This study includes monitoring results from sampling events in 2002 and 2003 for the remaining priority pollutants not monitored by the RMP. The RPA was conducted and the WQBELs were calculated using RMP data from 1993 through 2003 for inorganics and organics at the Yerba Buena Island RMP station, and additional data from the BACWA *Ambient Water Monitoring: Final CTR Sampling Update Report* for the Yerba Buena Island RMP station. The Discharger may utilize the receiving water study provided by BACWA to fulfill all requirements of the August 6, 2001 letter for receiving water monitoring in this Order.

e. **RPA Determination.** The MECs, WQOs/WQC, basis for the WQOs/WQC, background concentrations used, and Reasonable Potential conclusions from the RPA are listed in the following table for all constituents analyzed. Some of the constituents in the CTR were not determined because of the lack of an objective/criteria or effluent data. Based on the RPA methodology in the SIP, some constituents did not demonstrate Reasonable Potential. The RPA results are shown below and Appendix A of this Fact Sheet. The pollutants that exhibit Reasonable Potential are copper, cyanide, and zinc.

**Table F-7. Summary of Reasonable Potential Analysis**

CTR #	Priority Pollutants	MEC or Minimum DL <sup>[a][b]</sup> (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL <sup>[a][b]</sup> (µg/L)	RPA Results <sup>[c]</sup>
1	Antimony	0.4	4300	1.8	No
2	Arsenic	1.7	36	2.46	No
3	Beryllium	< 0.06	No Criteria	0.215	Ud
4	Cadmium	0.3	9.4	0.13	No
5a	Chromium (III)	Not Available	209	Not Available	Ud
5b	Chromium (VI)	2.4	50	4.4	No
6	Copper	23	4.2	2.45	Yes
7	Lead	1.2	8.5	0.8	No
8	Mercury (303d listed)	0.019	0.025	0.0086	No
9	Nickel	5.1	12.6	3.7	No
10	Selenium (303d listed)	0.6	5	0.39	No
11	Silver	0.3	2.2	0.0516	No
12	Thallium	0.3	6.3	0.21	No
13	Zinc	130	86	4.4	Yes
14	Cyanide	7	1.0	< 0.4	Yes
15	Asbestos	Not Available	10 MFL	Not Available	No
16	2,3,7,8 TCDD (303d listed)	0.000000025	0.00000014	0.000000071	No <sup>[d]</sup>
17	Acrolein	< 1.0	780	< 0.5	No
18	Acrylonitrile	< 1.0	0.66	0.03	No
19	Benzene	< 0.27	71	< 0.05	No
20	Bromoform	< 0.1	360	< 0.5	No
21	Carbon Tetrachloride	< 0.42	4.4	0.06	No
22	Chlorobenzene	< 0.19	21000	< 0.5	No
23	Chlorodibromomethane	0.8	34	< 0.05	No
24	Chloroethane	< 0.34	No Criteria	< 0.5	Ud
25	2-Chloroethylvinyl ether	< 0.31	No Criteria	< 0.5	Ud
26	Chloroform	130	No Criteria	< 0.5	Ud
27	Dichlorobromomethane	13	46	< 0.05	No
28	1,1-Dichloroethane	< 0.28	No Criteria	< 0.05	Ud
29	1,2-Dichloroethane	< 0.18	99	0.04	No
30	1,1-Dichloroethylene	< 0.37	3.2	< 0.5	No
31	1,2-Dichloropropane	< 0.2	39	< 0.05	No
32	1,3-Dichloropropylene	< 0.47	1700	Not Available	No
33	Ethylbenzene	< 0.3	29000	< 0.5	No
34	Methyl Bromide	< 0.42	4000	< 0.5	No
35	Methyl Chloride	< 0.36	No Criteria	< 0.5	Ud
36	Methylene Chloride	< 0.38	1600	0.5	No

SEAFIRTH ESTATES COMPANY AND PROPERTY OWNERS WITHIN THE SEAFIRTH ESTATES SUBDIVISION  
 SEAFIRTH ESTATES WASTEWATER TREATMENT PLANT  
 ORDER R2-2006-0082  
 NPDES NO. CA0038893

CTR #	Priority Pollutants	MEC or Minimum DL <sup>[a][b]</sup> (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL <sup>[a][b]</sup> (µg/L)	RPA Results <sup>[c]</sup>
37	1,1,2,2-Tetrachloroethane	< 0.3	11	< 0.05	No
38	Tetrachloroethylene	< 0.32	8.85	< 0.05	No
39	Toluene	< 0.25	200000	< 0.3	No
40	1,2-Trans-Dichloroethylene	< 0.3	140000	< 0.5	No
41	1,1,1-Trichloroethane	< 0.35	No Criteria	< 0.5	Ud
42	1,1,2-Trichloroethane	< 0.27	42	< 0.05	No
43	Trichloroethylene	< 0.29	81	< 0.5	No
44	Vinyl Chloride	< 0.34	525	< 0.5	No
45	2-Chlorophenol	< 0.4	400	< 1.2	No
46	2,4-Dichlorophenol	< 0.3	790	< 1.3	No
47	2,4-Dimethylphenol	< 0.3	2300	< 1.3	No
48	2-Methyl- 4,6-Dinitrophenol	< 0.4	765	< 1.2	No
49	2,4-Dinitrophenol	< 0.3	14000	< 0.7	No
50	2-Nitrophenol	< 0.3	No Criteria	< 1.3	Ud
51	4-Nitrophenol	< 0.2	No Criteria	< 1.6	Ud
52	3-Methyl 4-Chlorophenol	< 0.3	No Criteria	< 1.1	Ud
53	Pentachlorophenol	< 0.4	7.9	< 1.0	No
54	Phenol	< 0.2	4600000	< 1.3	No
55	2,4,6-Trichlorophenol	< 0.2	6.5	< 1.3	No
56	Acenaphthene	< 0.17	2700	0.0015	No
57	Acenaphthylene	< 0.03	No Criteria	0.00053	Ud
58	Anthracene	< 0.16	110000	0.0005	No
59	Benzydine	< 0.3	0.00054	< 0.0015	No
60	Benzo(a)Anthracene	< 0.12	0.049	0.0053	No
61	Benzo(a)Pyrene	< 0.09	0.049	0.00029	No
62	Benzo(b)Fluoranthene	< 0.11	0.049	0.0046	No
63	Benzo(ghi)Perylene	< 0.06	No Criteria	0.0027	Ud
64	Benzo(k)Fluoranthene	< 0.16	0.049	0.0015	No
65	Bis(2-Chloroethoxy)Methane	< 0.3	No Criteria	< 0.3	Ud
66	Bis(2-Chloroethyl)Ether	< 0.3	1.4	< 0.3	No
67	Bis(2-Chloroisopropyl)Ether	< 0.6	170000	Not Available	No
68	Bis(2-Ethylhexyl)Phthalate	0.3	5.9	< 0.5	No
69	4-Bromophenyl Phenyl Ether	< 0.4	No Criteria	< 0.23	Ud
70	Butylbenzyl Phthalate	< 0.4	5200	< 0.52	No
71	2-Chloronaphthalene	< 0.3	4300	< 0.3	No
72	4-Chlorophenyl Phenyl Ether	< 0.4	No Criteria	< 0.3	Ud
73	Chrysene	< 0.14	0.049	0.0024	No
74	Dibenzo(a,h)Anthracene	< 0.04	0.049	0.00064	No
75	1,2-Dichlorobenzene	< 0.52	17000	< 0.8	No
76	1,3-Dichlorobenzene	< 0.36	2600	< 0.8	No
77	1,4-Dichlorobenzene	< 0.42	2600	< 0.8	No
78	3,3 Dichlorobenzidine	< 0.3	0.077	< 0.001	No
79	Diethyl Phthalate	< 0.4	120000	< 0.24	No
80	Dimethyl Phthalate	< 0.4	2900000	< 0.24	No
81	Di-n-Butyl Phthalate	< 0.4	12000	< 0.5	No
82	2,4-Dinitrotoluene	< 0.3	9.1	< 0.27	No

CTR #	Priority Pollutants	MEC or Minimum DL <sup>[a][b]</sup> (µg/L)	Governing WQO/WQC (µg/L)	Maximum Background or Minimum DL <sup>[a][b]</sup> (µg/L)	RPA Results <sup>[c]</sup>
83	2,6-Dinitrotoluene	< 0.3	No Criteria	< 0.29	Ud
84	Di-n-Octyl Phthalate	< 0.4	No Criteria	< 0.38	Ud
85	1,2-Diphenylhydrazine	< 0.3	0.54	0.0037	No
86	Fluoranthene	< 0.03	370	0.011	No
87	Fluorene	< 0.02	14000	0.00208	No
88	Hexachlorobenzene	< 0.4	0.00077	0.0000202	No
89	Hexachlorobutadiene	< 0.2	50	< 0.3	No
90	Hexachlorocyclopentadiene	< 0.1	17000	< 0.31	No
91	Hexachloroethane	< 0.2	8.9	< 0.2	No
92	Indeno(1,2,3-cd)Pyrene	< 0.04	0.049	0.004	No
93	Isophorone	< 0.3	600	< 0.3	No
94	Naphthalene	< 0.05	No Criteria	0.0023	Ud
95	Nitrobenzene	< 0.3	1900	< 0.25	No
96	N-Nitrosodimethylamine	< 0.4	8.1	< 0.3	No
97	N-Nitrosodi-n-Propylamine	< 0.3	1.4	< 0.001	No
98	N-Nitrosodiphenylamine	< 0.4	16	< 0.001	No
99	Phenanthrene	< 0.03	No Criteria	0.0061	Ud
100	Pyrene	< 0.03	11000	0.0051	No
101	1,2,4-Trichlorobenzene	< 0.3	No Criteria	< 0.3	Ud
102	Aldrin	< 0.003	0.00014	Not Available	No
103	alpha-BHC	< 0.002	0.013	0.000496	No
104	beta-BHC	< 0.001	0.046	0.000413	No
105	gamma-BHC	< 0.001	0.063	0.0007034	No
106	delta-BHC	< 0.001	No Criteria	0.000042	Ud
107	Chlordane (303d listed)	< 0.005	0.00059	0.00018	No
108	4,4'-DDT (303d listed)	< 0.001	0.00059	0.000066	No
109	4,4'-DDE (linked to DDT)	< 0.001	0.00059	0.000693	No
110	4,4'-DDD	< 0.001	0.00084	0.000313	No
111	Dieldrin (303d listed)	< 0.002	0.00014	0.000264	No
112	alpha-Endosulfan	< 0.002	0.0087	0.000031	No
113	beta-Endosulfan	< 0.001	0.0087	0.000069	No
114	Endosulfan Sulfate	< 0.001	240	0.0000819	No
115	Endrin	< 0.002	0.0023	0.000036	No
116	Endrin Aldehyde	< 0.002	0.81	Not Available	No
117	Heptachlor	< 0.003	0.00021	0.000019	No
118	Heptachlor Epoxide	< 0.002	0.00011	0.00002458	No
119-125	PCBs sum (303d listed)	< 0.4	0.00017	Not Available	No
126	Toxaphene	< 0.2	0.00020	Not Available	No
	Tributyltin	Not Available	0.01	< 0.001	No
	Total PAHs	Not Available	15	Not Available	No

[a] The Maximum Effluent Concentration (MEC) or maximum background concentration is the actual detected concentration unless there is a "<" sign before it, in which case the value shown is the minimum detection level.

[b] The MEC or maximum background concentration is "Not Available" when there are no monitoring data for the constituent.

[c] RPA Results = Yes, if MEC > WQO/WQC, or B > WQO/WQC and MEC is detected;  
 = No, if MEC and B are < WQO/WQC or all effluent data are undetected;  
 = Undetermined, if no criteria have been promulgated;

= Cannot Determine, if there are insufficient data.

[d] The background concentration of 2,3,7,8 TCDD ( $7.1 \times 10^{-8}$   $\mu\text{g/L}$ ) toxicity equivalents is higher than the applicable criterion ( $1.4 \times 10^{-8}$   $\mu\text{g/L}$ ); and a detectable TCDD TEQ concentration ( $2.5 \times 10^{-9}$   $\mu\text{g/L}$ ) is present in effluent from the Paradise Cove WWTP; however, because 2,3,7,8 TCDD has not actually been detected in effluent from the Seafirth Estates WWTP and the facility's service area is very small (30 homes), the Regional Water Board also does not find reasonable potential for TCDD TEQ, and effluent limitations are not required.

(1) **Constituents with limited data.** The Discharger has performed limited sampling and analysis for the constituents listed in the CTR. This data set was supplemented with effluent data for toxics from the Paradise Cove WWTP (a nearby and similar WWTP) to perform the RPA. In some cases, Reasonable Potential cannot be determined because effluent data are limited, or ambient background concentrations are not available. The Discharger will continue to monitor for these constituents in the effluent using analytical methods that provide the best feasible detection limits. When additional data become available, further RPA will be conducted to determine whether to add numeric effluent limitations to this Order or to continue monitoring.

(2) **Pollutants with no Reasonable Potential.** WQBELs are not included in this Order for constituents that do not demonstrate Reasonable Potential; however, monitoring for those pollutants is still required. If concentrations of these constituents are found to have increased significantly, the Discharger will be required to investigate the source(s) of the increase(s). Remedial measures are required if the increases pose a threat to water quality in the receiving water.

4. **WQBEL Calculations.** WQBELs were developed for the toxic and priority pollutants that were determined to have reasonable potential to cause or contribute to exceedances of the WQOs or WQC. The WQBELs were calculated based on appropriate WQOs/WQC and the appropriate procedures specified in Section 1.4 of the SIP. The WQOs or WQC used for each pollutant with Reasonable Potential are discussed below and presented in Attachment 1 of this Fact Sheet.

a. **Copper**

(1) *Copper WQC.* The saltwater criteria for copper in the CTR are 4.2  $\mu\text{g/L}$  for chronic protection and 5.5  $\mu\text{g/L}$  for acute protection. These criteria were determined using site-specific translators of 0.74(chronic) and 0.88 (acute), as recommended by the Clean Estuary Partnership's North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators (2005). Site-specific translators were applied to chronic (3.1  $\mu\text{g/L}$  dissolved metal) and acute (4.8  $\mu\text{g/L}$  dissolved metal) criteria of the Basin Plan and the CTR for protection of salt water aquatic life to calculate the criteria of 4.2  $\mu\text{g/L}$  for chronic protection and 5.5  $\mu\text{g/L}$  for acute protection, which were used to perform the RPA.

(2) *RPA Results* This Order establishes effluent limitations for copper because the 23  $\mu\text{g/L}$  MEC exceeds the governing WQC of 4.2  $\mu\text{g/L}$ , demonstrating reasonable potential by Trigger 1, as defined in section IV. C. 3. b of this Fact Sheet, above.

(3) *Copper WQBELs.* WQBELs are calculated based on water quality criteria of the CTR. The criteria are expressed as total recoverable metal, using site-specific

translators recommended by the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (2004), and a water effects ration (WER) of 2.4, as recommended by the Partnership. The following table presents final effluent limitations for copper calculated according to SIP procedures (and a coefficient of variation of 0.6). The newly calculated limitations include a dilution credit.

**Table F-8. WQBELs for Copper**

Effluent Limitations for Copper		
	AMEL	MDEL
Based on CTR Criteria	54 µg/L	109 µg/L

- (4) *Immediate Compliance Feasible.* Regional Water Board staff considered the Discharger's effluent data from 2002, but the data contained only three data points; and therefore, it was not possible to perform a meaningful statistical analysis of feasibility. The Regional Water Board staff, therefore, compared the MEC (23 µg/L) to the AMEL (54 µg/L) to verify that it is feasible for the Discharger to immediately comply with the WQBELs. Based on the analysis, the Regional Water Board concludes that immediate compliance with final effluent limitations for copper is feasible, and final effluent limitations will become effective upon adoption of the Order.
- (5) *Alternate Limitations for Copper.* As described in the Clean Estuary Partnership's *North of Dumbarton Bridge Copper and Nickel Site-Specific Objective Determination* (December 2004), the Regional Water Board is proposing to develop site-specific criteria for copper in non-ocean, marine waters of the Region. Proposed site-specific objectives for copper are 2.5 and 3.9 µg/L as four-day and one-hour average criteria, respectively. If these site-specific objectives for cyanide are adopted, final effluent limitations, calculated according to Section 1.4 of the SIP, using a WER of 2.4, would be 42 µg/L (AMEL) and 84 µg/L (MDEL). If these site-specific objectives for copper are adopted, the alternate effluent limits will become effective upon the adoption date, so long as the site-specific objectives and their current justification remain unchanged. The alternate copper limits based on these draft SSOs are more stringent than the copper WQBELs specified in this permit. As such, it is appropriate to have the alternate limits come into effect as soon as the SSO is effective. Current effluent data suggests that the Discharger can comply; however this Order requires copper pollution prevention measures to ensure future compliance with these copper WQBELs.
- (5) *Antibacksliding/Antidegradation.* Antibacksliding and antidegradation requirements are satisfied as the previous order did not include effluent limitations for copper.

**b. Zinc**

- (1) *Zinc WQC.* The saltwater, chronic and acute criteria from the Basin Plan and the CTR for zinc for protection of aquatic life are 86 and 95 µg/L, respectively. These criteria

were determined using the U.S. EPA translator from the CTR of 0.946 for both acute and chronic criteria. The criteria of 86 µg/L for chronic protection and 95 µg/L for acute protection were used to perform the RPA and to calculate effluent limitations.

- (2) *RPA Results.* This Order establishes effluent limitations for zinc because the maximum observed effluent concentration of 130 µg/L exceeds the applicable water quality criteria for this pollutant, demonstrating reasonable potential by Trigger 1, as described in section IV. C. 3. b of this Fact Sheet, above.
- (3) *Zinc WQBELs.* Final WQBELs for zinc, calculated according to SIP procedures, are 450 and 910 µg/L – the average monthly and maximum daily effluent limitations, respectively.
- (4) *Immediate Compliance Feasible.* Regional Water Board staff examined the Discharger's effluent data from 2002 and 2003 and performed a statistical analysis of the data to determine the 95th and 99th percentile of the data set. Here, the data set was determined to be normally distributed. Comparison of the 95th percentile with the AMEL (150 µg/L vs 450 µg/L) and the 99th percentile with the MDEL (170 µg/L vs 910 µg/L) and the mean with the long term average (95 µg/L vs 290 µg/L) shows that the Discharger can meet the final limitations.
- (5) *Interim Effluent Limits.* Because it is feasible for the Discharger to immediately comply with the final WQBELs for zinc, interim effluent limitations and a schedule for compliance with final limitations are not included in the reissued permit.
- (6) *Antibacksliding/Antidegradation.* As the previous permit did not include effluent limitations for zinc, the WQBELs established by the Order are consistent with anti-backsliding requirements of the Clean Water Act.

c. **Cyanide**

- (1) *Cyanide WQC.* The NTR includes WQC that govern cyanide for the protection of aquatic life in marine waters. The NTR specifies a saltwater Criterion Maximum Concentration (acute criterion) and Criterion Chronic Concentration (chronic criterion) of 1 µg/L.
- (2) *RPA Results.* This Order establishes effluent limitations for cyanide because the 7 µg/L MEC exceeds the governing WQC of 1 µg/L, demonstrating reasonable potential by Trigger 1, as described in section IV. C. 3. b of this Fact Sheet, above.
- (3) *Cyanide WQBELs.* The cyanide WQBELs calculated according to SIP procedures are 6.4 µg/L maximum daily and 3.2 µg/L average monthly.
- (4) Cyanide compliance is a regional problem associated with the analytical protocol for cyanide analysis due to matrix interferences. There is also evidence to suggest that, to some degree, cyanide measured in effluents may be an artifact of the analytical method used or the result of analytical interferences. In general, the chemistry of cyanide formation in POTW effluents is highly complex, involving both chemical and environmental factors, in ways that are still poorly understood, despite considerable

research. In addition, it is not known whether the form(s) of cyanide that are measured in POTW effluents exhibit toxicity in these environments.

- (5) *SSO and Ambient Background Data Collection.* A regional discharger-funded study is underway for development of a cyanide SSO or recalculation of the criteria. The cyanide study plan was submitted on October 29, 2001, and the final report was submitted on June 29, 2003. The WQBELs will be re-calculated based on a cyanide SSO, or updated criteria if adopted. A draft Basin Plan amendment including new SSOs for the Bay, compliance strategies for shallow water dischargers, and implementation policy for the SSOs has been developed and is under public review and comment.
- (6) *Immediate Compliance Infeasible.* The Discharger asserts that the WWTP cannot immediately comply with final WQBELs for cyanide. The Discharger's data set contained only three data points, only one of which was a detected value. Due to the limited data, it was not possible to perform a meaningful statistical analysis of feasibility. Direct comparison of the MEC (7 µg/L) to the AMEL (3.2 µg/L), however, confirms that it is infeasible for the Discharger to immediately comply with final WQBELs for cyanide.
- (7) *Interim Effluent Limitation.* Because it is infeasible for the Discharger to immediately comply with the cyanide WQBELs, an interim limitation is required. Because the previous permit did not include effluent limitations for cyanide, interim limitations of the reissued permit must be based on current treatment performance. As explained above, however, it is not possible to perform a meaningful statistical evaluation of current treatment performance, and therefore, the Regional Water Board is establishing an interim, maximum daily effluent limitation of 7.0 µg/L, which reflects the highest observed concentration in effluent to date.
- (8) *Term of Interim Effluent Limitations.* The cyanide interim limitation shall remain in effect until April 27, 2010 or until the Regional Water Board amends the limitations based on additional data or SSOs.
- (9) *Alternative Limit for Cyanide.* As described in *Draft Staff Report on Proposed Site-Specific Water Quality Objectives and Effluent Limit Policy for Cyanide for San Francisco Bay* (November 10, 2005), the Regional Water Board is proposing to develop site-specific criteria for cyanide in non-ocean, marine waters of the Region. Proposed site-specific objectives for cyanide are 2.9 and 9.4 µg/L as four-day and one-hour average criteria, respectively. If these site-specific objectives for cyanide are adopted, final effluent limitations, calculated according to Section 1.4 of the SIP, would be 21 µg/L (AMEL) and 42 µg/L (MDEL). The Order may be reopened to amend final WQBELs for cyanide accordingly, if the site-specific objectives are adopted; however, the alternate limits will become effective only if the site-specific objectives and their justification, as described in the Staff Report of November 10, 2005, remain unchanged.

(10) *Antibacksliding/Antidegradation*. As the previous permit did not include effluent limitations for cyanide, the WQBELs established by the Order are consistent with anti-backsliding requirements of the Clean Water Act.

d. Effluent Limit Calculations

Table F-9. Effluent Limit Calculations

Priority Pollutants	Copper	Copper	Zinc	Cyanide	Cyanide
Basis and Criteria type	BP & CTR SW Aq Life Criteria	Alternate Limits Based on SSOs (Dec 2004)	BP & CTR SW Chronic Criterion	CTR/NTR SW Chronic & Acute Criteria	Alternate Limits Based on SSOs (Nov 2005)
CTR Criteria – Acute	5.5	---		1.0	
CTR Criteria – Chronic	4.2	---		1.0	
SSO – Acute	---	3.9			9.4
SSO – Chronic	---	2.5			2.9
WER	2.4	2.4		1.0	1.0
Lowest WQO			86	1.0	2.9
Acute Translator	0.88	0.88	0.946	---	---
Chronic Translator	0.74	0.74	0.946	---	---
Dilution Factor (D) (if applicable)	9	9	9	9	9
no. of samples per month	4	4	4	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y	Y	Y	Y
HH criteria analysis required? (Y/N)	N	N	N	N	N
Applicable Acute WQO	13.1	10.6	95	1.0	9.4
Applicable Chronic WQO	10.1	8.1	86	1.0	2.9
HH criteria	---	---	---		
Background (max conc for Aquatic Life calc)	2.45	2.45	4.4	0.4	0.4
Background (avg conc for HH calc)	---	---	---	---	---
Is the pollutant Bioaccumulative(Y/N)? (e.g., Hg)	N	N	N	N	N
ECA acute	108.9	84.3	910.4	6.4	90.4
ECA chronic	78.5	59.0	820.4	6.4	25.4
ECA HH	---	---	---	---	---
No. of data points <10 or at least 80% of data reported non-detect? (Y/N)	Y	Y	Y	Y	Y
Average of data					
Standard Deviation					
CV calculated	N/A	N/A	N/A	N/A	N/A
CV (Selected) - Final	0.6	0.6	0.6	0.6	0.6
ECA acute mult99	0.32	0.32	0.32	0.32	0.32
ECA chronic mult99	0.53	0.53	0.53	0.53	0.53
LTA acute	34.95	27.07	291.33	2.048	29.03
LTA chronic	41.40	31.13	434.81	3.392	13.4
minimum of LTAs	34.95	27.07	291.33	2.048	13.4
AMEL mult95	1.55	1.55	1.55	1.55	1.55
MDEL mult99	3.11	3.11	3.11	3.11	3.11
AMEL (aq life)	54.26	42.03	450	3.2	20.8

Priority Pollutants	Copper	Copper	Zinc	Cyanide	Cyanide
Basis and Criteria type	BP & CTR SW Aq Life Criteria	Alternate Limits Based on SSOs (Dec 2004)	BP & CTR SW Chronic Criterion	CTR/NTR SW Chronic & Acute Criteria	Alternate Limits Based on SSOs (Nov 2005)
MDEL(aq life)	108.86	84.31	910	6.4	41.72
MDEL/AMEL Multiplier	2.01	2.01	---	---	---
AMEL (human hlth)	---	---	---	---	---
MDEL (human hlth)	---	---	---	---	---
minimum of AMEL for Aq. life vs HH	54	42	450	3.2	3.2
minimum of MDEL for Aq. Life vs HH	109	84	910	6.4	6.4
Current limit in permit (30-d avg)	N/A	N/A	N/A	N/A	N/A
Current limits in permit (daily average)	N/A	N/A	N/A	N/A	N/A
Final limit - AMEL	54	42	450	3.2	21
Final limit - MDEL	109	84	910	6.4	42
Max Effl Conc (MEC)	N/A	N/A	130	7.0	7.0

#### 5. Whole Effluent Toxicity (WET).

The Basin Plan requires dischargers to either conduct flow-through effluent toxicity tests or perform static renewal bioassays (Chapter 4, Acute Toxicity) to measure the toxicity of wastewaters and to assess negative impacts upon water quality and beneficial uses caused by the aggregate toxic effect of the discharge of pollutants. This Order includes effluent limitations for whole effluent acute toxicity that are unchanged from the previous permit. Compliance evaluation is based on 96-hour static-renewal bioassays. All bioassays shall be performed according to the U.S. EPA-approved method in 40 CFR Part 136, currently "Methods for Measuring the Acute Toxicity of Effluents and Receiving Water, 5th Edition."

#### 6. Chronic Toxicity.

Due to the characteristics of the influent, the Regional Water Board has determined there is no RPA for chronic toxicity; therefore, there are no chronic toxicity monitoring requirements in this permit. This discharge is considered minor (0.0075 mgd), and there are no industrial type discharges into the WWTP. The influent consists of domestic wastewater from about 30 homes.

#### 7. Total Coliform Bacteria.

Limitations for total coliform bacteria from the expiring Order are retained in this Order. These limitations (240 MPN/100 mL, median in five consecutive samples and 10,000 MPN/100 mL in any single sample) are based on Table 4-2 of the Basin Plan.

#### 8. Total Residual Chlorine

The instantaneous maximum limitation for chlorine of 0.0 mg/L is being retained by this Order. The U.S. EPA established the following criteria for chlorine-produced oxidants for

protection of saltwater aquatic life from U.S. EPA's *Quality Criteria for Water 1986* (The Gold Book, 1986, EPA 440/5-86-001).

Chronic Criterion	Acute Criterion
7.5 µg/L	13 µg/L

Because effluent concentrations at the level of applicable saltwater criteria are below the levels of detection of standard methods of analysis, as defined in Standard Methods for the Examination of Water and Wastewater, the Regional Water Board establishes effluent limitations for total chlorine residual in the Basin Plan, Table 4-2, at 0.0 mg/L.

**8. Applicable Water Quality-Based Effluent Limitations**

a. Numeric Limitations

**Table F-10. Summary of Water Quality Based Effluent Limitations for E-001**

Parameter	Units	Final Effluent Limits		Interim Effluent Limits	
		Daily Maximum (MDEL)	Monthly Average (AMEL)	Daily Maximum	Monthly Average
Copper	µg/L	109	54	---	----
Zinc	µg/L	910	450	---	---
Cyanide	µg/L	6.4	3.2	7.0	----
Total Residual Chlorine <sup>[1]</sup>	mg/L	---	---	---	0.0

[1] The chlorine residual requirement is defined as below the limit of detection by standard methods of analysis, as defined in Standard Methods for the Examination of Water and Wastewater. The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine and sodium bisulfate dosage (which could be interpolated), and chlorine concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

- b. Total Coliform Bacteria: The treated wastewater, at some point in the treatment process prior to discharge, shall meet the following bacteriological limitations:
- (1) The moving median value of most probable number (MPN) of total coliform bacteria in any five (5) consecutive samples shall not exceed 240 MPN/100 mL; and,
  - (2) any single sample shall not exceed 10,000 MPN/100 mL.
- c. Whole Effluent Acute Toxicity: Representative samples of the effluent shall meet the following limitations for acute toxicity. Compliance with these limitations shall be achieved in accordance with Provision E.6 of this Order:
- (1) The survival of bioassay test organisms in 96-hour bioassays of undiluted effluent shall be:
    - (a) A three (3) sample median value of not less than 90 percent survival; and
    - (b) A single (1) maximum value of not less than 70 percent survival.

- 2) The 3-sample median acute toxicity limit is further defined as follows:

Any bioassay test showing survival of 90 percent or greater is not a violation of this limitation. A bioassay test showing survival of less than 90 percent represents a violation of this effluent limitation, if one of the past two bioassay tests also shows less than 90 percent survival.

- 3) Bioassays shall be performed using the most up-to-date U.S. EPA protocol. 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, and exceptions may be granted to the Discharger by the Executive Officer and the Environmental Laboratory Accreditation Program (ELAP) upon the Discharger's request with justification.

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

- A. Receiving Water Limitations V.A. (conditions to be maintained): These limitations are in the existing permit and are based on water quality objectives for physical, chemical, and biological characteristics from Chapter 3 of the Basin Plan.
- B. Receiving Water Limitation V.B. (special limitations): This limitation is in the existing permit, requires compliance with Federal and State law, and is self-explanatory.
- C. Receiving Water Limitation V.C. (compliance with State law): Self-explanatory.

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The principal purposes of a monitoring program by a discharger are to:

1. Document compliance with waste discharge requirements and prohibitions established by the Regional Water Board,
2. Facilitate self-policing by the discharger in the prevention and abatement of pollution arising from waste discharge,
3. Develop or assist in the development of limitations, discharge prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and to
4. Prepare water and wastewater quality inventories.

NPDES regulations at 40 CFR 122.48 require all NPDES permits to specify recording and reporting of monitoring results. CWC Sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement Federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for the Seafirth Estates wastewater treatment facility.

The MRP is a standard requirement in almost all NPDES permits issued by the Regional Water Board, including this Order. It contains definitions of terms, specifies general sampling and analytical protocols, and sets out requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the California Water Code, and Regional Water Board's policies. The MRP also contains a sampling program specific for the Seafirth Estates wastewater treatment facility. It defines the sampling stations and frequency, the pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all parameters for which effluent limitations are specified. Monitoring for additional constituents, for which no effluent limitations are established, is also required to provide data for future completion of RPAs for them.

**A. Influent Monitoring.**

The MRP includes monitoring at A-001 for conventional pollutants. This Order requires daily flow monitoring and quarterly monitoring for BOD and total suspended solids, to facilitate self-policing for the prevention and abatement of potential pollution arising in the effluent discharge.

**B. Effluent Monitoring.**

The MRP includes monitoring at E-001 and E-001D for conventional and toxic pollutants. This Order requires monthly monitoring of dissolved oxygen. Sampling for chlorine residual and pH were changed from daily to 5 days per week, because the plant is in a remote location and is not staffed on the weekends. The sampling frequencies for BOD, TSS, total coliform, and oil and grease are the same as the previous permit; which is quarterly except for oil and grease which is annual. The sampling frequency for copper, and cyanide is quarterly.

**C. Whole Effluent Toxicity Testing Requirements.**

The Basin Plan requires dischargers to either conduct flow-through effluent toxicity tests or perform static renewal bioassays (Chapter 4, Acute Toxicity) to measure the toxicity of wastewaters and to assess negative impacts upon water quality and beneficial uses caused by the aggregate toxic effect of the discharge of pollutants.

**D. Receiving Water Monitoring.**

The Discharger shall collect or participate in collecting background ambient receiving water data with other Dischargers and/or through the Regional Monitoring Program (RMP). This information is required to perform RPAs and to calculate effluent limitations. The data on the conventional water quality parameters (pH, salinity, and hardness) shall also be sufficient to characterize these parameters in the ambient receiving water at a point after the discharge has mixed with the receiving waters. This provision may be met through monitoring under the BACWA Coordinated Receiving Water Monitoring Effort, or a similar ambient monitoring program for San Francisco Bay. This Order may be reopened, as appropriate, to incorporate effluent limits or other requirements based on the Regional Water Board review of these data.

## VII. RATIONALE FOR PROVISIONS

### A. Standard Provisions (Provision A).

Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D and G of this Order.

### B. Special Provisions (Provision C).

1. **Reopener Provisions.** These provisions are based on 40 CFR 123 and allow future modification of this Order and its effluent limitations as necessary in response to updated WQOs that may be established in the future.
2. **Effluent Characterization Study.** This Order does not include effluent limitations for the selected constituents addressed in the August 6, 2001 Letter that do not demonstrate Reasonable Potential, but this provision requires the Discharger to continue monitoring for these pollutants as described in the August 6, 2001 Letter and as specified in the MRP of this Order. If concentrations of these constituents increase significantly, the Discharger will be required to investigate the source of the increases and establish remedial measures, if the increases result in reasonable potential to cause or contribute to an excursion above the applicable WQO/WQC. This provision is based on the Basin Plan and the SIP.
3. **Ambient Background Receiving Water Study.** This provision is based on the Basin Plan, the SIP, and the August 6, 2001 Letter for priority pollutant monitoring. As indicated in the permit, this requirement may be met by participating in the collaborative BACWA study.
4. **Pollutant Minimization Program.** This provision is based on Chapter 4 of the Basin Plan and Sections 2.2.1 and 2.4.5 of the SIP.
5. **Sanitary Sewer Overflows and Sewer System Management Plan.** This provision is to explain the Order's requirements as they relate to the Discharger's collection system, and to promote consistency with the State Water Resources Control Board adopted Statewide General Waste Discharge Requirements for Sanitary Sewer Overflow (SSO WDRs) and a related Monitoring and Reporting Program (Order No. 2006-0003-DWQ). The bases for these requirements are described elsewhere in this Fact Sheet.
6. **Whole Effluent Acute Toxicity.** This provision describes the acute toxicity requirements of this Order.
7. **Sludge Management Practices Requirements.** This provision is based on the Basin Plan (Chapter IV) and 40 CFR 257 and 503.
8. **Construction, Operation, and Maintenance Specifications**
  - a. Wastewater Facilities, Review and Evaluation, Status Reports: This provision is based on the previous permit and the Basin Plan.

- b. Operations and Maintenance Manual, Review: This provision is based on the Basin Plan, the requirements of 40 CFR 122, and the previous permit.
- c. Status Reports and Contingency Plan, Review and Status Report: This provision is based on the Basin Plan, the requirements of 40 CFR 122, and the previous permit.

9. **Order Reapplication.** This provision is based on 40 CFR 122.46 (a).

10. **Install Seafirth Pump Station or Modifications to Treatment Plant.** As the treatment plant is currently structured, the Discharger cannot monitor influent flow, effluent flow, influent BOD, influent TSS, total coliform, and residual chlorine. The provision specifies plant modifications necessary to determine compliance with the effluent limits and prohibitions established in this Order. The Discharger prefers to convert Seafirth into a pump station and convey the wastewater to Sanitary District No. 5, Paradise Cove. According to the Discharger the cost for this conversion, which includes building a pressure line to the Paradise Cove treatment plant is close to \$900K. This cost is equivalent to purchasing a new package treatment plant to comply with the new permit conditions. The Discharger must follow certain procedures to enable the conversion. These procedures include (1) receiving "will serve" letters from Sanitary District No. 5 (the "will serve" letters were approved by the District Board at its November 2006 Board meeting), (2) obtaining agreement from a majority of Seafirth homeowners to finance the conversion, (3) installing a pump station, and (4) installing a pressure line. In recognition of the Discharger's past efforts and desire to pursue this option, this Order defers the required treatment plant upgrades for about one year.

## VIII. PUBLIC PARTICIPATION

The San Francisco Bay Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Seafirth Estates Wastewater Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

### A. Notification of Interested Parties.

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the Marin Independent Journal.

### B. Written Comments.

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, Attention: Gina Kathuria

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on November 13, 2006.

### **C. Public Hearing.**

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: December 13, 2006  
Time: 9:00 AM  
Location: Elihu M. Harris Building  
First Floor Auditorium  
1515 Clay Street  
Oakland, CA 94612  
Contact: Gina Kathuria, (510) 622-2378, [gkathuria@waterboards.ca.gov](mailto:gkathuria@waterboards.ca.gov)

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is [www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay) where you can access the current agenda for changes in dates and locations.

### **D. Waste Discharge Requirements Petitions.**

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

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

### **E. Information and Copying.**

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m. except from noon to 1:00 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (510) 622-2300.

### **F. Register of Interested Persons.**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

### **G. Additional Information.**

SEAFIRTH ESTATES COMPANY AND PROPERTY OWNERS WITHIN THE SEAFIRTH ESTATES SUBDIVISION  
SEAFIRTH ESTATES WASTEWATER TREATMENT PLANT  
ORDER R2-2006-0082  
NPDES NO. CA0038893

Requests for additional information or questions regarding this order should be directed to Gina Kathuria at (510) 622-2378 or [gkathuria@waterboards.ca.gov](mailto:gkathuria@waterboards.ca.gov).