California Regional Water Quality Control Board
San Francisco Bay Region

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Edmund G. Brown, Jr.
Governor

ORDER No. R2-2012-0013
NPDES No. CA0037737

WASTE DISCHARGE REQUIREMENTS
FOR THE NORTH SAN MATEO COUNTY SANITATION DISTRICT
DISCHARGE TO THE PACIFIC OCEAN VIA DISCHARGE POINT 001

The following discharger at the discharge location(s) indicated is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	North San Mateo County Sanitation District
Name of Facility	North San Mateo County Sanitation District Wastewater Treatment Plant and Wastewater Collection System
Facility Address	153 Lake Merced Boulevard
	Daly City, California 94015
	San Mateo County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary and tertiary treated effluent	37° 42’ 48” N	122° 30’ 50” W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the Regional Water Board on:	February 8, 2012
This Order shall become effective on:	April 1, 2012
This Order shall expire on:	March 31, 2017
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

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

Digitally signed by Bruce Wolfe
Date: 2012.02.10 10:44:19 -08'00'

Bruce H. Wolfe, Executive Officer

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I. FACILITY INFORMATION

The following discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	North San Mateo County Sanitation District
Name of Facility	North San Mateo County Sanitation District Wastewater Treatment Plant and its Wastewater Collection System
Facility Address	153 Lake Merced Boulevard
	Daly City, CA 94015
	San Mateo County
Facility Contact, Title, and Phone	Patrick Sweetland, Director, (650) 991-8200
Mailing Address	333 90th Street, Daly City, CA 94015
Type of Facility	Publicly Owned Treatment Works
Facility Design Flow	10.3 million gallons per day (mgd) (average dry weather design capacity) 25 mgd (peak wet weather capacity)
Facility Permitted Flow	8.0 mgd (average dry weather flow)
Service Area	City of Daly City, portions of San Mateo County, Town of Colma, San Francisco Jail, and Westborough Water District within the City of South San Francisco
Service Area Population	126,700

II. FINDINGS

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

A. **Background.** The North San Mateo County Sanitation District (hereinafter Discharger), a subsidiary of the City of Daly City, is currently discharging pursuant to Order No. R2-2006-0068 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0037737. The Discharger submitted a complete report of waste discharge, dated June 3, 2011, and applied for an NPDES permit renewal to discharge up to 8.0 mgd (average dry weather flow) of treated wastewater from the North San Mateo County Sanitation District Wastewater Treatment Plant.

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

B. **Facility Description.** The Discharger owns and operates the wastewater treatment plant (Plant) and its wastewater collection system (hereinafter collectively Facility) serving the City of Daly City, portions of San Mateo County, the Town of Colma, the San Francisco County Jail, and the Westborough Water District within the City of South San Francisco. The combined service population is approximately 126,700.

The treatment system consists of screening, compaction, primary clarification, pure oxygen activated sludge aeration, secondary clarification, chlorination by sodium hypochlorite, and dechlorination by sodium bisulfate. The Plant has an average dry weather flow design capacity of 10.3 million gallons per day (mgd); however, the Discharger discharges and operates the Plant

at or below the permitted average dry weather flow rate of 8 mgd (averaged over 3 consecutive dry months) and does not anticipate a need to increase the permitted flow rate in the next five years.

The Discharger's collection system includes approximately 180 miles of sanitary sewer lines and eight lift stations that convey domestic sewage to the Facility. Approximately 0.6 mgd of Daly City flow is discharged to the Southeast Water Pollution Control Plant (NPDES No. CA0037664) of San Francisco for treatment and disposal; therefore, this separate collection system is not part of the Facility.

C. **Wastewater Treatment Process.** Flow into the Plant is measured with a Parshall flume, and then flows through two microscreens, where it is dispersed evenly to six primary basins. Two additional primary basins are only brought into service when needed during wet weather flows. The primary effluent is then split, with 70% pumped to two pure oxygen activated sludge reactors that each has three turbine mixers. The other 30% is stored in equalization basins until late evening when it is pumped back into the secondary system for treatment. Flows from the activated sludge basins are then dispersed between three secondary clarifiers for settling. The effluent then flows over weirs into a chlorine contact mixing chamber.

Attachment B provides a map of the area around the Facility. Attachment C provides a Facility flow schematic.

D. **Wastewater Disposal and Discharge Description.** Treated wastewater is conveyed through the Vista Grande Tunnel structure and a 27-inch force main located at Fort Funston in San Francisco County. Discharge is through a submerged diffuser extending 2,500 feet from the shoreline and terminating at a depth of approximately 32 feet (-32 mean lower low water) to the Pacific Ocean, a water of the United States. During January 2006 through March 2011, the Plant's average effluent flow was 7.1 mgd; the average dry weather effluent flow during June through August was 6.5 mgd; the highest daily average flow was 11.5 mgd. The Discharge receives an initial dilution of 115:1. During the dry season, approximately 2.77 mgd of the effluent is reserved; it receives tertiary treatment for water reclamation projects.

E. **Biosolids Treatment Process.** During the wastewater treatment process, the primary basins collect settleable solids in a sump, from which they are pumped to two gravity thickeners where ferrous chloride is added. The thickened solids are removed and pumped to two anaerobic digesters. Overflow from the gravity thickeners flows back to the headworks. Primary and secondary scum is pumped to an air flotation tank, along with the waste activated sludge, and treated with a polymer. The thickened sludge is pumped to an anaerobic digester, while the overflow goes into the primary effluent sump and is pumped to the secondary system.

Digester temperatures are kept at 95° to 100°F. The laboratory performs total solids and volatile solids tests each day to confirm vector reduction. The digested solids are then treated with polymer and centrifuged. The centrate from the centrifuge flows into the headworks. Dried biosolids are pumped to a storage silo, then hauled offsite.

F. Reclamation. Reclamation requirements are specified in Regional Water Board's General Water Reuse Order No. 96-011.

G. Legal Authorities. This Order is issued pursuant to Clean Water Act (CWA) section 402 and the United States Environmental Protection Agency's (USEPA's) implementing regulations, and California Water Code (CWC) Chapter 5.5, Division 7 (commencing with section 13370). It serves as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with section 13260).

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

I. California Environmental Quality Act (CEQA). Under CWC section 13389, this action to adopt an NPDES permit is exempt from CEQA Chapter 3.

J. Technology-based Effluent Limitations. CWA section 301(b) and NPDES regulations at 40 Code of Federal Regulations (CFR) 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR 133. A discussion of the technology-based effluent limitation development is included in the Fact Sheet (Attachment F).

K. Water Quality-based Effluent Limitations. CWA section 301(b) and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. NPDES regulations at 40 CFR 122.44(d)(1)(i) mandate that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant that has no numeric objective, water quality-based effluent limitations (WQBELs) must be established using (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

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

According to Basin Plan Table 2-1, beneficial uses of the Pacific Ocean are as listed in the table below. The Basin Plan implements State Water Board Resolution No. 88-63, which establishes State policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Because the total dissolved solids levels of marine waters significantly exceed 3,000 mg/L, ocean waters meet an exception to Resolution No. 88-63; therefore, the MUN designation does not apply.

Table 5. Basin Plan Beneficial Uses

Receiving Water Name	Beneficial Use(s)
Pacific Ocean	Industrial Service Supply (IND) Ocean, Commercial, and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Marine Habitat (MAR) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Noncontact Water Recreation (REC2) Navigation (NAV)

M. California Ocean Plan. The State Water Board adopted the Water Quality Control Plan for Ocean Waters of California, California Ocean Plan (hereinafter Ocean Plan) in 1972 and has amended it several times, most recently in 2009. The most recent changes became effective on March 10, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below. To protect these beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. The Basin Plan incorporates by reference the provisions of the Ocean Plan. Requirements of this Order implement the Ocean Plan.

Table 6. Ocean Plan Beneficial Uses

Receiving Water Name	Beneficial Use(s)
Pacific Ocean	Industrial Water Supply Water Contact and Non-Contact Recreation, Including Aesthetic Enjoyment Navigation Commercial and Sport Fishing Mariculture Preservation and Enhancement of Designated Areas of Special Biological Significance (ASBS) Fish Migration Rare and Endangered Species Marine Habitat Fish Spawning and Shellfish Harvesting

N. 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

(65 Fed. Reg. 24641 [April 27, 2000], codified at 40 CFR 131.21). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The 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.

O. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based restrictions on individual pollutants that are no more stringent than required by the federal CWA. The technology-based effluent limitations consist of restrictions on 5-day carbonaceous biochemical oxygen demand ($CBOD_5$), total suspended solids TSS), and pH. Restrictions on these pollutants are specified in federal and state regulations as discussed in the Fact Sheet (Attachment F).

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives in State waters have been approved pursuant to federal law and are the applicable water quality based standards. The procedures used for this Order to calculate individual WQBELs for State waters are based on the Ocean Plan, which USEPA approved on October 8, 2010.

P. Antidegradation Policy. NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the federal antidegradation policy where the federal policy applies under federal law and requires that existing quality of waters be maintained unless degradation is justified based on specific findings. Water quality plans implement and incorporate by reference, both the State and federal antidegradation policies. The permitted discharges are consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

Q. 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 effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order (Order No. R2-2006-0068), with the exception of chronic toxicity, $CBOD_5$, TSS, oil and grease, settleable solids, and turbidity, as discussed in Fact Sheet section IV.D.1 (Attachment F).

R. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.

S. 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 Board to require technical and monitoring reports. The Monitoring

and Reporting Program (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

T. Standard and Special Provisions. Attachment D contains standard provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42. The Discharger must comply with all Standard Provisions and with those additional conditions that apply pursuant to 40 CFR 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. The Fact Sheet (Attachment F) provides rationales for the special provisions.

U. 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 written comments and recommendations. The Fact Sheet provides details regarding the notification.

V. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharges authorized by this Order. The Fact Sheet provides details regarding the public hearing.

IT IS HEREBY ORDERED, that this Order supersedes Order Nos. R2-2006-0068, except for enforcement purposes, and, in order to meet the provisions contained in CWC Division 7 (commencing with section 13000) and regulations adopted thereunder, and CWA provisions and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

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

B. Discharge at any point at which the treated wastewater does not receive an initial dilution of at least 115:1 (nominal) is prohibited. Compliance shall be achieved by proper operation and maintenance of the discharge outfall to ensure that it (or its replacement, in whole or in part) is in good working order, and is consistent with or can achieve better mixing, than that described in the Fact Sheet (Attachment F). The Discharger shall address measures taken to assure this in its application for permit reissuance.

C. Discharge flow rates shall not exceed 8.0 mgd (permitted average dry weather flow as determined over three consecutive dry weather months each year).

D. The bypass of untreated or partially treated wastewater to waters of the United States is prohibited, except as provided for in the conditions stated in Attachment D, sections I.G.2 and I.G.4, of this Order. The discharge of municipal or industrial waste sludge either directly or indirectly to the ocean, or into a waste stream that discharges to the ocean, is prohibited. The discharge of sludge digestion supernatant directly to the ocean, or into a waste stream that discharges to the ocean without further treatment, is prohibited.

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 – DISCHARGE POINT 001

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

A. Effluent limitations for CBOD, TSS, and Total Chlorine Residual

The Discharge shall comply with the effluent limits in Table 7 below:

Table 7. Effluent Limitations for CBOD, TSS, and Total Chlorine Residual

Parameter	Units	Effluent Limitations[1]				
		Average Monthly	Average Weekly	Six-month median	Maximum Daily	Instantaneous Maximum
$CBOD_5$	mg/L	25	40	---	---	---
TSS	mg/L	30	45	---	---	---
Total Chlorine Residual[2]	mg/L	---	---	0.14	0.57	4.3
	kg/day	---	---	4.2	17	---

(1) Mass emission limitations are based on average peak weather capacity of 8 mgd and apply only during dry-weather months from June through September. Weekly and monthly mass effluent limitations shall be calculated by averaging the reported daily values over the number of days for the monitoring interval.

(2) The Discharger may elect to use a continuous on-line monitoring system(s) for measuring flows, chlorine residual and sodium bisulfite (or other dechlorinating chemical) dosage (including a safety factor) and concentration to prove that chlorine residual exceedances are false positives. If convincing evidence is provided, Regional Water Board staff may conclude that these false positive chlorine residual exceedances are not violations of this permit limitation.

B. 85 Percent Removal, $CBOD_5$ and TSS: The arithmetic mean of the $CBOD_5$ and TSS values for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by concentration, for influent samples collected at approximately the same time during the same period.

C. pH: The pH of the discharge shall not exceed 9.0 nor be less than 6.0. If the Discharger monitors pH continuously, pursuant to 40 CFR 401.17, the Discharger shall be in compliance with the pH limitation provided that both of the following conditions are satisfied: (i) the total time during which the pH values are outside the required range of pH values shall not exceed 7 hours 26 minutes in any calendar month; and (ii) no individual excursion from the range of pH values shall exceed 60 minutes.

D. Enterococcus Bacteria: The treated wastewater, prior to discharge, shall not exceed a 30-day geometric mean value of 2,500 MPN/100 mL. No single sample may exceed 7,400 MPN/100 mL.

V. RECEIVING WATER LIMITATIONS

Receiving water limitations are based on Ocean Plan WQOs and are a required part of this Order. Compliance shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is complete.

A. The following bacteriological objectives shall be maintained throughout the water column:

1. The geometric mean total coliform density of the five most recent samples from each site shall not exceed 1,000 CFU/100 mL, nor shall any single sample exceed 10,000 CFU/100 mL or 1,000 CFU/100 mL if the ratio of fecal coliform to total coliform exceeds 0.1.

2. The geometric mean fecal coliform density of the five most recent samples from each site shall not exceed 200 CFU/100 mL, nor shall any single sample exceed 400 CFU/100 mL.

B. Discharges authorized by this Order at Discharge Point 001 shall not cause exceedances of the following surface water limitations in ocean receiving waters:

1. Floating particulates and grease and oil shall not be visible.

2. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

3. Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.

4. The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.

5. The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally as a result of the discharge of oxygen demanding waste material.

6. The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.

7. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.

8. The concentration of substances set forth in Ocean Plan Table B in marine sediments shall not be increased to levels that would degrade indigenous biota.

9. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

10. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

11. Discharges shall not cause exceedances of water quality objectives for ocean waters of the State established in Ocean Plan Table B.

12. Marine communities, including vertebrate, invertebrate and plant species, shall not be degraded.

13. The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

14. The concentration of organic materials in fish, shellfish, or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.

15. Discharge of low-level radioactive waste shall not degrade marine life.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with Federal Standard Provisions included in Attachment D of this Order.

2. **Regional Standard Provisions.** The Discharger shall comply with all applicable items of the Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits (Attachment G), including amendments thereto.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP (Attachment E) and future revisions thereto, including applicable sampling and reporting requirements in the two standard provisions listed in section VI.A, above.

C. Special Provisions

1. **Reopener Provisions.**

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

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

b. As new or revised water quality objectives (WQOs) or Total Maximum Daily Loads (TMDLs) come into effect for surface waters of the State (whether statewide, regional, or site-specific.) In such cases, effluent limitations in this Order may be modified as necessary to reflect updated WQOs and wasteload allocations in TMDLs. Adoption of effluent limitations contained in this Order is not intended to restrict in any way future modifications based on legally adopted WQOs, TMDLs, or as otherwise permitted under federal regulations governing NPDES permit modifications.

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

d. If State Water Board precedential decisions, new policies, new laws, or new regulations (e.g., pertaining to chronic toxicity or total chlorine residual) become available.

e. An administrative or judicial decision on a separate NPDES permit or WDR that addresses requirements similar to this discharge; or

f. As authorized by law.

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

2. Effluent Characterization Study and Report

a. Study Elements

The Discharger shall continue to characterize and evaluate discharge from discharge point 001 to verify that the "no" or "cannot determine" reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. The Discharger shall collect representative samples of the discharges at Monitoring Location EFF-001 or EFF-001D as defined by the MRP (Attachment E) at least once per calendar year.

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

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

b. Reporting Requirements

i. Routine Reporting

The Discharger shall, within 30 days of receipt of analytical results, report in the transmittal letter for the appropriate monthly self-monitoring report the following:

a. Indication that a sample or samples for this characterization study was or were collected; and

b. Identity priority pollutants detected at or above applicable water quality criteria (see Ocean Plan Table B or Fact Sheet [Attachment F] Table F-7), together with the detected concentrations of those pollutants.

ii. Annual Reporting

The Discharger shall provide a summary of the annual data evaluation and source investigation in the annual self-monitoring report.

iii. Final Report

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

3. Best Management Practices and Pollutant Minimization Program (PMP)

a. The Discharger shall develop and conduct a PMP if all of the following conditions are true:

i. The calculated effluent limitation is less than the Minimum Level (ML);

ii. The concentration of the pollutant is reported as Detected Not Quantified (DNQ); and

iii. There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

b. Alternatively, the Discharger shall develop and conduct a PMP if all of the following conditions are true:

i. The calculated effluent limitation is less than the Method Detection Limit (MDL);

ii. The concentration of the pollutant is reported as Non-detect (ND);

iii. There is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

c. The Discharger shall develop and conduct a PMP if there is other evidence to determine that pollutant is present in the effluent at levels above the calculated effluent limitation. Examples of evidence may include, but are not limited to, the following:

i. health advisories for fish consumption,

ii. presence of whole effluent toxicity,

iii. results of benthic or aquatic organisms tissue sampling,

iv. sample results from analytical methods more sensitive than methods included in the permit (in accordance with section 3.b above), and

v. the concentration of the pollutant is reported as DNQ and the effluent limitation is less than the MDL.

d. If the Discharger is required to develop a PMP based on the circumstances described above, the PMP shall include, at a minimum, the following:

i. An annual review and semi-annual monitoring of potential sources of the reportable pollutant, 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 pollutant in the influent to the wastewater treatment system, or an alternative measure 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 pollutant in the effluent at or below the effluent limitation;

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

v. An annual status report to be sent to the Regional Water Board by February 28 of each year, including:

(a) All Pollutant Minimization Program monitoring results for the previous year;

(b) A list of potential sources of the reportable pollutant;

(c) A summary of all action taken in accordance with the control strategy; and

(d) A description of actions to be taken in the following year.

4. Special Provisions for Municipal Facilities (POTWs Only)

a. **Biosolids Management Practices Requirements**

i. All biosolids must be disposed of, managed, or reused in a municipal solid waste landfill, through land application, as a Class A compost, through a waste to energy facility, or other recognized and approved technology, or disposed of in a sludge-only landfill in accordance with 40 CFR 503. If the Discharger desires to dispose of biosolids by a different method, a request for permit modification shall be submitted to USEPA 180 days before start-up of the alternative disposal practice. All requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the Discharger. The Regional Water Board shall be copied on relevant correspondence and reports forwarded to USEPA regarding sludge management practices.

ii. Biosolids treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

iii. The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal that has a likelihood of adversely affecting human health or the environment.

iv. The discharge of biosolids shall not cause waste material to be in a position where it is or can be carried from the biosolids treatment and storage site and deposited in waters of the State.

v. The biosolids treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

vi. For biosolids applied to the land, placed on a surface disposal site, or fired in an incinerator as defined in 40 CFR 503, the Discharger shall submit an annual report to USEPA and the Regional Water Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503, postmarked by February 15 of each year, for the period covering the previous calendar year.

vii. Biosolids disposed of in a municipal solid waste landfill shall meet the requirements of 40 CFR 258. In the annual Self-Monitoring Report, the Discharger shall include the amount of biosolids disposed and the landfill to which it was sent.

viii. Permanent on-site biosolids storage or disposal activities are not authorized by this Order. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity.

ix. Biosolids Monitoring and Reporting Provisions of this Regional Water Board's Standard Provisions (Attachment G) apply to sludge handling, disposal, and reporting practices.

x. The Regional Water Board may amend this Order prior to expiration if changes occur in applicable State and federal biosolids regulations.

b. **Sanitary Sewer Overflows and Sewer System Management Plan**

The Discharger's collection system is part of the Facility subject to this Order. As such, the Discharger shall properly operate and maintain its collection system (Attachment D, Federal Standard Provisions—Permit Compliance, subsection I.D). The Discharger shall report any noncompliance (Attachment D, Federal 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, Federal Standard Provisions—Permit Compliance, subsection I.C).

The General Waste Discharge Requirements for Collection System Agencies (General Collection System WDRs), Order No. 2006-0003 DWQ, has requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. While the Discharger must comply with both the General Collection System WDRs and this Order, the General Collection System WDRs more clearly and specifically stipulate requirements for operation and maintenance, and for reporting and mitigating sanitary sewer overflows.

Implementation of the General Collection System WDRs requirements for proper operation and maintenance and mitigation of spills will satisfy the corresponding federal NPDES requirements specified in Attachment D (as supplemented by Attachment G) of this Order. Following notification and reporting requirements in the General Collection System WDRs will satisfy NPDES reporting requirements specified in Attachment D (as supplemented by Attachment G) of the Order for sanitary sewer overflows from the collection system upstream of the Plant boundaries. Attachments D and G of this Order specify reporting requirements for unauthorized discharges from anywhere within the Plant downstream of the Plant boundaries.

VII. COMPLIANCE DETERMINATION

Compliance with effluent limitations for pollutants identified in Ocean Plan Table B shall be determined using sample reporting protocols defined in Attachment A – Definitions, the MRP (Attachment E), Fact Sheet, and the Regional Standard Provisions (Attachment G). 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 Table B pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level.

ATTACHMENT A – DEFINITIONS

Acute Toxicity:

a. Acute Toxicity (TUa)

Expressed in Toxic Units Acute (TUa)

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

b. Lethal Concentration 50% (LC 50)

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

When it is not possible to measure the 96-hour LC 50 due to greater than 50 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

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

where:

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

Areas of Special Biological Significance (ASBS) are those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

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.

Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

Chronic Toxicity: This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TU_c)

Expressed as Toxic Units Chronic (TU_c)

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

b. No Observed Effect Level (NOEL)

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

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.

DDT shall mean the sum of 4,4’DDT, 2,4’DDT, 4,4’DDE, 2,4’DDE, 4,4’DDD, and 2,4’DDD.

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

Detected, but Not Quantified (DNQ) are those sample results less than the reported Minimum Level, but greater than or equal to the laboratory’s MDL.

Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Downstream Ocean Waters shall mean waters downstream with respect to ocean currents.

Dredged Material: Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as “spoil”.

Enclosed Bays are 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

headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

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

Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.

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

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

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

Instantaneous Maximum Effluent Limitation: 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).

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

Mariculture is the culture of plants and animals in marine waters independent of any pollution source.

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

Maximum Daily Effluent Limitation (MDEL): The highest allowable daily discharge of a pollutant.

MDL (Method Detection Limit) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, PART 136, Appendix B.

Minimum Level (ML) is the concentrations 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.

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

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. If a discharge outside the territorial waters of the state could affect the quality of the waters of the state, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

PCBs (polychlorinated biphenyls) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254 and Aroclor-1260.

Pollutant Minimization Program (PMP) 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 Ocean Plan Table B pollutants 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.

Reported Minimum Level 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 II of the Ocean Plan in accordance with Section III.C.5.a. of the Ocean Plan or established in accordance with Section III.C.5.b. of the Ocean Plan. 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 reported ML.

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.

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

Significant Difference is defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

Six-month Median Effluent Limitation: The highest allowable moving median of all daily discharges for any 180-day period.

State Water Quality Protection Areas (SWQPAs) are non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolution Nos. 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

TCDD Equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below.

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
octa CDD	0.001
2,3,7,8 tetra CDF	0.1
1,2,3,7,8 penta CDF	0.05
2,3,4,7,8 penta CDF	0.5
2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

This definition of TCDD equivalents supersedes the definition of dioxin-TEQ in Attachment G, Table A (but the MLs in Attachment G remain in effect).

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.)

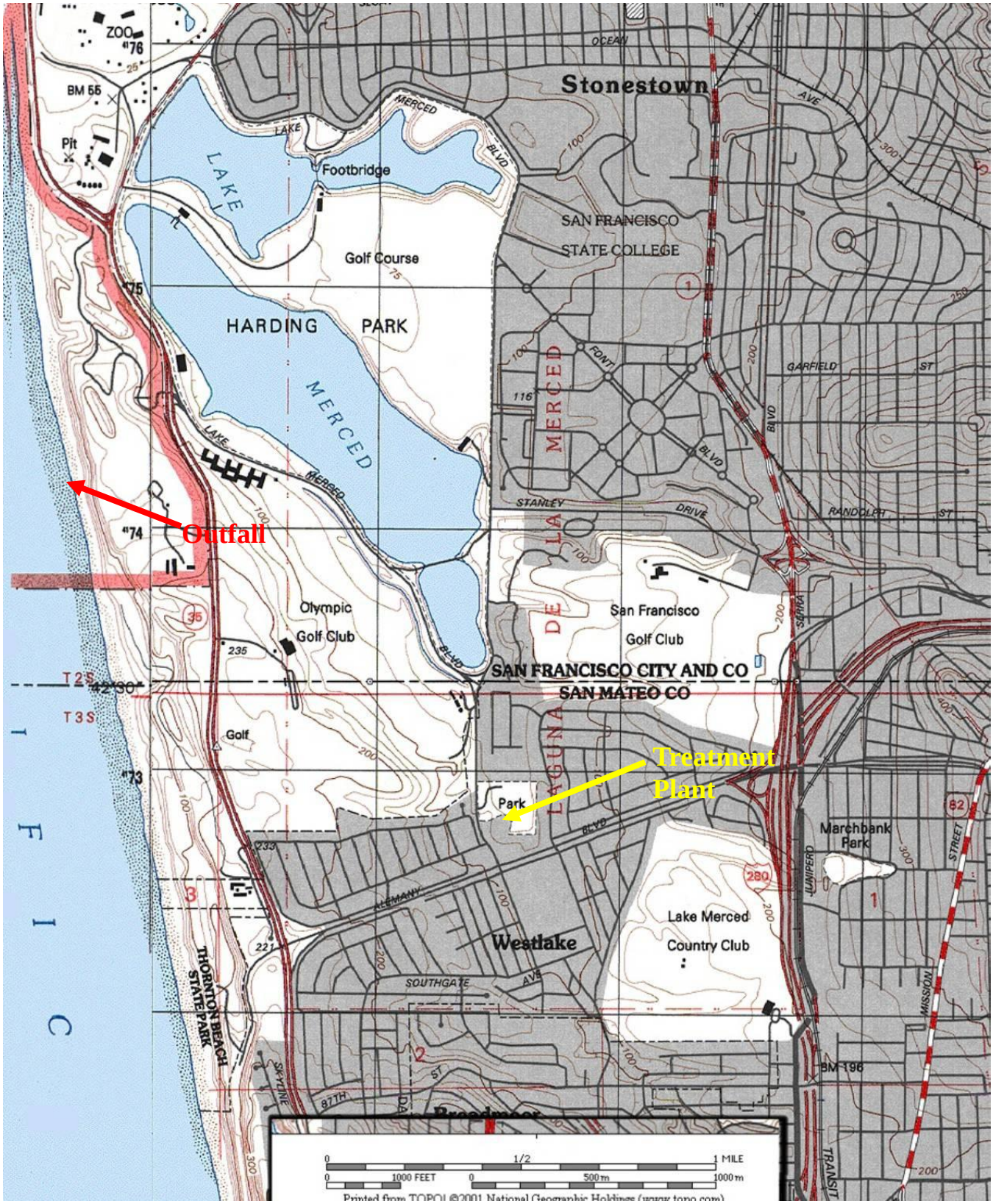
Waste: As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin, i.e., gross, not net, discharge.

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

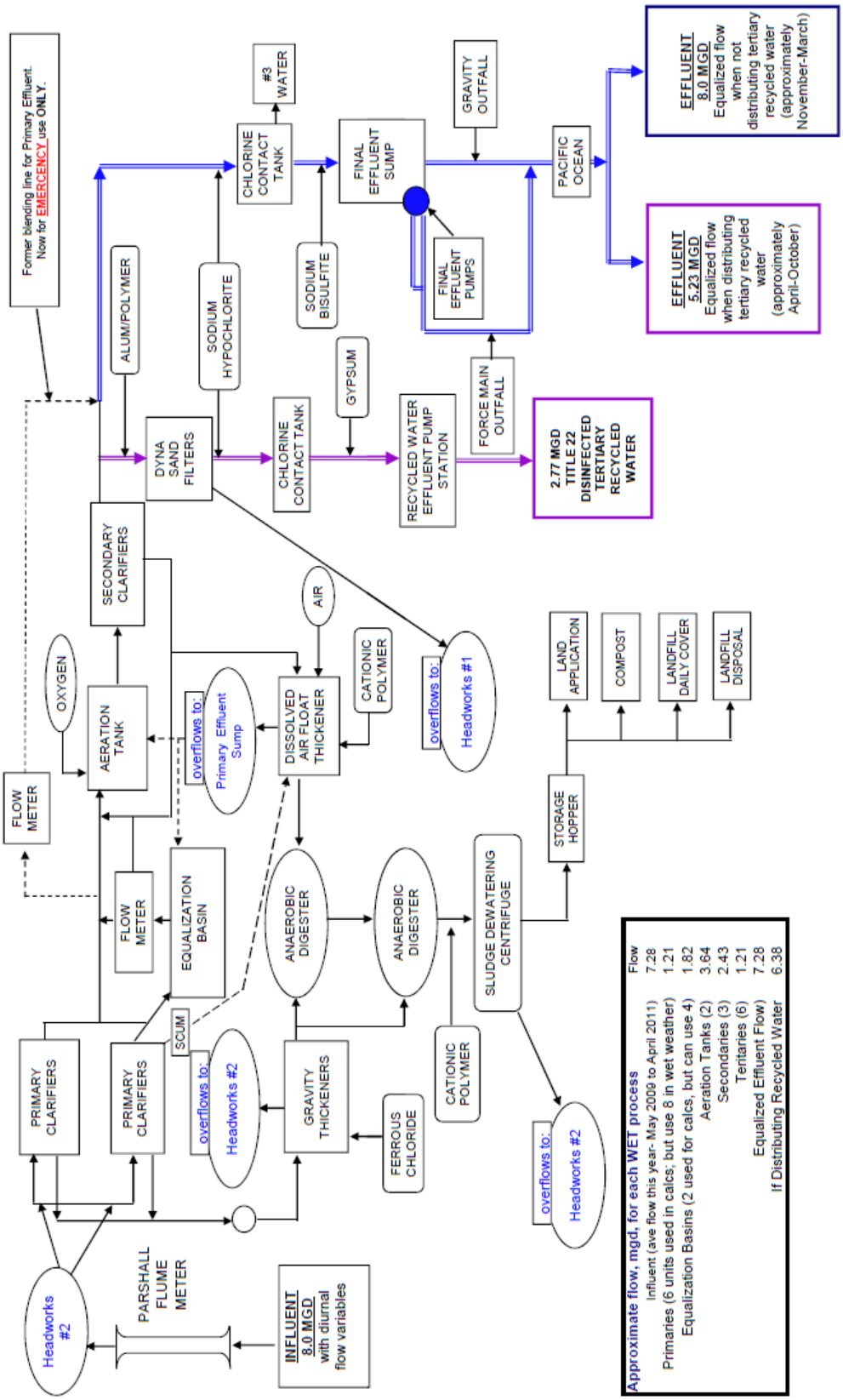
ATTACHMENT B – MAP

Figure B-1. Facility Location

Figure B-2. Facility Location Topographic Map



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D –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 and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; 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 CWA 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 yet 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 Board, State Water Board, United States Environmental Protection Agency (USEPA), 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); Water Code, § 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (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)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (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, I.G.4, 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)(i)(A));

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent

a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 122.41(m)(4)(i)(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 (24-hour notice). (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 Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 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 below (24-hour notice) (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 this Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 CFR § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 CFR § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 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 USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

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

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (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 USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 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 and State Water Board. (40 CFR § 122.22(b)(3).)

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

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

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

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 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 Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in 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).)

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 section 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 that are not subject to effluent limitations in this Order. (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 V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 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 USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 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 this 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)

Title 40 of the Code of Federal Regulations (CFR), section 122.48 (40 CFR 122.48), requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) sections 13267 and 13383 also authorize the Regional Water Quality Control Board (hereinafter Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 CFR 122.62, 122.63, and 124.5. If any discrepancies exist between the MRP and the Regional Standard Provisions (Attachment G), the MRP prevails.

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Influent	INF-001	At any point in the treatment facility headworks at which all waste tributary to the system is present and preceding any phase of treatment, and exclusive of any return flows or process side streams.
Effluent	EFF-001	At any point in the treatment facility between the point of discharge and the point at which all waste tributary to the outfall is present and after going through all treatment processes (may be the same as E-001D)
	EFF-001D	At any point in the treatment facility at which point adequate contact with the disinfectant is ensured.
Receiving Waters (1)	R-001 (1)	100 feet north of midpoint of diffuser area
	R-002 (1)	100 feet south midpoint of diffuser area
	R-003 (1)	100 feet east of east end of diffuser area
	R-004 (1)	100 feet west of west end of diffuser area

(1) The diffuser area occurs along the last 200 linear feet of the outfall pipe (i.e., from its 2,300th foot to its 2,500th foot going from east to west).

III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor influent to the facility at Monitoring Location INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units[1]	Sample Type[2]	Minimum Sampling Frequency
Flow	mgd	Continuous	Continuous
Carbonaceous Biochemical Oxygen Demand (5-Day @ 20°C)($CBOD_5$)	mg/L	C-24	1/Week
Total Suspended Solids (TSS)	mg/L	C-24	2/Week

(1) Unit Abbreviations:
mgd = million gallons per day
mg/L = milligrams per liter

(2) Sample Type Abbreviations:
Continuous = Measured continuously, and recorded and reported daily
C-24 = 24-hour composite

IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated effluent at Monitoring Location EFF-001 or EFF-001D as follows:

Table E-3. Effluent Monitoring

Parameter	Units[1]	Sample Type [2]	Minimum Sampling Frequency
Flow Rate	mgd	Continuous	Continuous
$CBOD_5$	mg/L	C-24	1/Week
TSS	mg/L	C-24	2/Week
Oil & Grease [3]	mg/L	Grabs	1/Quarter
Turbidity	NTU	C-24	1/Day
pH	pH units	Grab	1/Day
Dissolved Oxygen	mg/L, % saturation	Grab	1/Day
Temperature	°C	Grab	1/Day
Sulfides (if DO < 5.0 mg/L) Total and Dissolved	mg/L	Grab	1/Day
Total Chlorine Residual[4]	mg/L	Continuous	1/Hour
Enterococcus	MPN/100 mL	Grab	1/Week
Total Ammonia as Nitrogen	mg/L	C-24	2/Month
Chronic Toxicity[5] – EFF-001	TU_c	C-24	1/Year
TCDD Equivalents[6]	µg/L	Grab	1/Year
All Applicable Standard Observations [7]	---	---	1/Day
All Other Table B Pollutants [8]	---	---	1/Year

(1) Unit Abbreviations:

mgd	=	million gallons per day
mg/L	=	milligrams per liter
µg/L	=	micrograms per liter
NTU	=	Nephelometric Turbidity Units
% Saturation	=	percent saturation of dissolved oxygen in water
MPN/100 mL	=	Most Probable Number per 100 milliliters
^{o}C	=	degree Celsius

(2) Sample Type Abbreviations:

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

(3) Each oil and grease sampling and analysis event shall be conducted in accordance with USEPA Method 1664.

(4) Effluent chlorine concentrations shall be monitored continuously, at EFF-001 only. Chlorine residual concentrations shall be monitored and reported for sampling points both before and after dechlorination. The Discharger shall report the maximum residual chlorine concentration observed following dechlorination on a daily basis. Total chlorine dosage (kg/day) shall be recorded on a daily basis.

Alternatively, at its option, the Discharger may evaluate compliance with this requirement by recording discrete readings from the continuous monitoring every hour on the hour, or by collecting grab samples every hour, for a total of 24 readings or samples per day if the following conditions are met: (a) the Discharger shall retain continuous monitoring readings for at least three years; (b) the Discharger shall acknowledge in writing that the Regional Water Board reserves the right to use all other continuous monitoring data for discretionary enforcement; and (c) the Discharger must provide in writing the brand names, model numbers, and serial numbers of the equipment used to continuously monitor dechlorinated final effluent chlorine residual. If the identified equipment is replaced, the Discharger shall provide the Regional Water Board, in writing within 72 hours of the successful startup of the new equipment, the new equipment's brand name, model number, and serial number. The written notification identified in items (a) through (c) shall be in the form of a letter addressed to the Regional Water Board's Executive Officer with a certification statement as listed in the October 19, 2004, Regional Water Board letter re: *Chlorine Compliance Strategy for Dischargers Using Continuous Monitoring Devices.*

(5) Critical life stage toxicity tests shall be performed and reported in accordance with the Chronic Toxicity Requirements specified in section V.A of this MRP.

(6) As defined in Attachment A to this Order. Compliance shall be determined as described in MRP section V.A.

(7) Discharger shall record standard observations of effluent, as specified in Attachment G, section III.C.2.

(8) All pollutants listed in Ocean Plan Table B, except total chlorine residual and ammonia nitrogen.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Monitoring Requirements

1. **Sampling**. The Discharger shall collect 24-hour composite samples of the effluent at Monitoring Location EFF-001 for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 24-hour composite samples collected on consecutive days are required.

2. **Test Species**. The Discharger shall use the most sensitive species as identified in the most recent screening test (conducted in April 2008), currently, the giant kelp (*Macrocystis pyrifera*) for routine monitoring. If giant kelp samples are determined to not meet quality control standards, the Dischargers may instead use the second most sensitive species, which is mussels.

3. **Frequency.** The frequency of routine and accelerated chronic toxicity monitoring shall be as specified below:

   (1) Routine Monitoring: once per year.

   (2) Accelerated Monitoring: Monthly.

   The Discharger shall accelerate monitoring to monthly after exceeding 116 TUc[1] (a performance goal, not an effluent limit, since there is no reasonable potential). The Executive Officer may specify a different frequency for accelerated monitoring based on the TUc results.

   (3) Return to routine monitoring if accelerated monitoring does not exceed 116 TUc.

   (4) If the accelerated testing shows consistent exceedance of the chronic toxicity performance goal of 116 TU_c, continue accelerated monitoring and initiate toxicity reduction evaluation (TRE) procedures in accordance with section C, below.

   (5) Return to routine monitoring after implementing appropriate elements of the TRE, and the toxicity drops below 116 TUc, or, based on the TRE results, the Executive Officer authorizes a return to routine monitoring.

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

4. **Rescreening.** The Discharger shall conduct a screening chronic toxicity test as described in Appendix E-1 following any significant change in the nature of the effluent and at least 180 days prior to application for permit reissuance. The Discharger shall conduct screening tests with a minimum of three test species, if possible including a vertebrate, an invertebrate, and an aquatic plant, for the first three suites of tests. If the first suite of re-screening tests demonstrates that the same species is the most sensitive then re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites. After the screening period, monitoring shall be conducted using the most sensitive species.

5. **Methodology**. Sample collection, handling, and preservation shall be in accordance with USEPA protocols. In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-2. These are "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms," currently EPA/600/R-95-136, August 1995 and "Short-term methods for estimating the chronic toxicity of effluents and receiving water to marine and estuarine organisms," currently EPA/821/R-02-014, October 2002. Any methodology exceptions must be granted by the Executive Officer and the Environmental Laboratory Accreditation Program. If specific identifiable substances in the discharge can be

[1] A TU_c equals 100 divided by the no observable effect level (NOEL). The NOEL is determined from IC_{25}, EC_{25}, or NOEC values. These terms, their usage, and other chronic toxicity monitoring program requirements are defined in the MRP (Attachment E).

demonstrated by the Discharger as being rapidly rendered harmless upon discharge to the receiving water, compliance with the chronic toxicity performance goal 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.

6. **Dilution Series.** The Discharger shall conduct tests with a control and five effluent concentrations of 0.22%, 0.43%, 0.86%, 1.7%, and 3.5%.

B. Chronic Toxicity Reporting Requirements

1. **Routine Reporting**. Toxicity test results for the current reporting period shall include, at a minimum, for each test:

   (1) Sample dates

   (2) Test initiation date

   (3) Test species

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

   (5) NOEC values in percent effluent

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

   (7) TUc values (100/NOEL, where NOEL=IC_{25}, EC_{25} or NOEC as discussed in Appendix E-1)

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

   (9) IC_{50} or EC_{50} values for reference toxicant tests

   (10) Available water quality measurements for each test (pH, dissolved oxygen, temperature, conductivity, hardness, salinity, ammonia)

2. **Reporting Summary**. The results of the chronic toxicity testing shall be provided in the Self-Monitoring Report and shall include a summary table of chronic toxicity data from at least the past three years. The information in the table shall include items listed above under B.1, specifically item numbers (1), (3), (5), (6) (IC_{25} or EC_{25}), (7), and (8).

C. Chronic Toxicity Reduction Evaluation (TRE). If toxicity monitoring shows a violation of the chronic toxicity performance goal established by the Order, the Discharge shall conduct a TRE, and shall take all reasonable steps to reduce toxicity once the source of toxicity is identified. The Discharger shall initiate a TRE in accordance with the following:

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

2. Within 30 days of date of completion of the accelerated monitoring tests showing consistent exceedance of the performance goal for chronic toxicity, the Discharge shall submit to the Regional Water Board a TRE work plan, which should be the generic work plan revised as appropriate for this toxicity event after consideration of available discharge data.

3. Within 30 days of the date of completion of the accelerated monitoring tests showing consistent exceedance of the chronic toxicity performance goal, the Discharger shall initiate a TRE in accordance with a TRE work plan that incorporates any and all comments from the Executive Officer.

4. The TRE shall be specific to the discharge and be prepared in accordance with current technical guidance and reference materials, including USEPA guidance materials. The TRE shall be conducted as a tiered evaluation process, such as summarized below:

   (1) Tier 1 consists of basic data collection (routine and accelerated monitoring).

   (2) Tier 2 consists of evaluation of optimization of the current treatment process, including operation practices and in-plant process chemicals.

   (3) Tier 3 consists of a toxicity identification evaluation (TIE).

   (4) Tier 4 consists of evaluation of options for additional wastewater treatment processes.

   (5) Tier 5 consists of evaluation of options for modifications of in-plant treatment processes.

   (6) Tier 6 consists of implementation of selected toxicity control measures, and follow-up monitoring and confirmation of implementation success.

5. The TRE may be ended at any stage if monitoring finds there is no longer consistent toxicity (complying with the performance goal in Section V.A.3.(2) above).

6. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity. All reasonable efforts using currently available TIE methodologies shall be employed.

7. As toxic substances are identified or characterized, the Discharger shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consist with toxicity performance goals.

8. Many recommended TRE elements parallel required or recommended efforts of source control, pollution prevention, and stormwater control programs. TRE efforts should be coordinated with such efforts. To prevent duplication of efforts, evidence of complying with requirements or recommended efforts of such programs may be acceptable to comply with TRE requirements.

9. The Regional Water Board recognizes that chronic toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Regional Water Board enforcement will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

D. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria as specified in the test methods manuals (EPA/821/R-02-014 and EPA/600/R-95-136), then the Discharger must re-sample and re-test at the earliest time possible.

3. Control and dilution water should be obtained from an unaffected area of the receiving waters. If the dilution water used is different from the culture water, a second control using culture water shall be used.

VI. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor the Pacific Ocean at Monitoring Stations R-001, R-002, R-003, and R-004 as follows:

Table E-4. Receiving Water Monitoring Requirements

Parameter	Units[(1)]	Sample Type	Minimum Sampling Frequency
Total Ammonia Nitrogen	mg/L	Grab	1/Year
pH	pH Units	Grab	1/Year
Dissolved Oxygen	mg/L, % saturation	Grab	1/Year
Temperature	^{o}C	Grab	1/Year
Total Coliform	MPN/100 mL	Grab	1/Year
Fecal Coliform	MPN/100 mL	Grab	1/Year
Salinity	ppt	Grab	1/Year

(1) Unit Abbreviations:
mg/L = milligrams per liter
µg/L = micrograms per liter
% Saturation = percent saturation of dissolved oxygen in water
MPN/100 mL = Most Probable Number per 100 milliliters
^{o}C = degree Celsius
ppt = parts per thousand

(2) Detection methods used for enterococcus shall be those presented in USEPA publication EPA 600/4-85/076, *Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure* unless the Executive Officer approves alternative methods.

VII. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Federal Standard Provisions (Attachment D) and Regional Standard Provisions (Attachment G) related to monitoring, reporting, and recordkeeping, with modifications shown in VII.D below.

B. Self-Monitoring Reports (SMRs)

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

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

   a. **Monthly SMRs** — Monthly SMRs shall be due 30 days after the end of each calendar month, covering that calendar month. The monthly SMR shall contain the applicable items described in sections V.B and V.C of both Attachments D and G of this Order. See Provision VI.C.6 (Effluent Characterization Study and Report) of this Order for information that must also be reported with the monthly SMR.

   b. **Annual SMR** — Annual SMRs shall be due February 1 each year, covering the previous calendar year. The annual SMR shall contain the items described in section V.C.1.f of the Regional Standard Provisions (Attachment G). See also Provisions VI.C.2 (Effluent Characterization Study and Report—Discharge Point No. 001) of the Order for requirements to submit reports with the annual SMR.

   c. **Additional Specifications for Submitting SMRs to CIWQS** — If the Discharger submits SMRs to CIWQS, it shall submit analytical results and other information using one of the following methods:

Table E-5 SMR Reporting for CIWQS (eSMR)

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for All Results	
Dissolved Oxygen Temperature	Required for Monthly Maximum and Minimum Results Only (1)	Discharger may use this method for all results or keep records
Cyanide Arsenic Cadmium Chromium Copper Lead Mercury Nickel Selenium Silver Zinc Dioxins and Furans (by USEPA Method 1613)	Required for All Results (2)	
Antimony Berylium	Not Required (unless identified in influent,	Discharger may use this method and submit results with application for

Parameter	Method of Reporting	
	EDF/CDF data upload or manual entry	Attached File
Thallium Pollutants by USEPA Methods 601, 602, 608, 610, 614, 624, and 625	effluent, or receiving water monitoring tables), But Encouraged (1)	permit reissuance, unless data submitted by CDF/EDF upload
Analytical Method	Not Required (Discharger may select "data unavailable") (1)	
Collection Time Analysis Time	Not Required (Discharger may select "0:00") (1)	

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

3. **Monitoring Periods.** Monitoring periods for all required monitoring shall be completed according to the following schedule:

Table E-6 Monitoring and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period
Continuous	Effective date of permit	All
1/Hour	Effective date of permit	Once per Hour
1/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.
2/Week	Effective date of permit	Sunday through Saturday
5/Week	Effective date of permit	Sunday through Saturday
2/Month	Effective date of permit	First day of calendar month through last day of calendar month
1/Month	Effective date of permit	First day of calendar month through last day of calendar month
1/Quarter	Effective date of permit	Once during November 1-January 31, once during February 1 – April 30, once during May 1 – July 31, once during August 1 – October 31
2/Year	Effective date of permit	Once during November 1 – April 30, once during May 1 – October 31
1/Year	Effective date of permit	Once during January 1 through December 31, alternate between once during November 1 – April 30, and next during May 1 – October 31

4. **ML and MDL Reporting.** The Discharger shall report with each sample result the Minimum Level (ML) and Method Detection Limit (MDL) as determined by Ocean Plan Appendix II and the applicable procedure in 40 CFR 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 ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

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

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

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

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

C. Discharge Monitoring Reports (DMRs)

1. As described in section VII.B.1 above, at any time during the term of this Order, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger is not required to submit DMRs in accordance with the requirements described below.

2. Once notified by the State or Regional Water Board, the Discharger shall submit hard copy DMRs. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to one of the addresses listed below:

Standard Mail	**FedEx/UPS/Other Private Carriers**
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Modifications to Attachment G

1. Attachment G section V.C.1.c.3 is revised as follows.

The Discharger shall report for each dioxin and furan congener the analytical result of effluent monitoring, including the quantifiable limit (reporting level), the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents as defined in Definitions (Attachment A), the Discharger shall set congener concentrations below minimum levels (ML) specified in Attachment G Table A to zero.

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

f. Annual self-monitoring report requirements

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

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

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

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

4) List of approved analyses, including the following:

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

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

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

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

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

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

g. Report submittal

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

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

h. Reporting data in electronic format – *Deleted*

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

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

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

a. Two (2)-Hour Notification

For any unauthorized discharges that enter a drainage channel or a surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the California Emergency Management

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

Agency (CalEMA, currently at 800-852-7550), the local health officers or directors of environmental health with jurisdiction over the affected water bodies, and the Regional Water Board. Timely notification by the Discharger to CalEMA also satisfies notification to the Regional Water Board. Notification shall include the following:

1) Incident description and cause;

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

3) Date and time the unauthorized discharge started;

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

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

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification — *Deleted*

c. 5-day Written Report

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

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

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

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

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

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

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

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

d. Communication Protocol — *Deleted*

APPENDIX E-1
CHRONIC TOXICITY
DEFINITION OF TERMS AND SCREENING PHASE REQUIREMENTS

I. Definition of Terms

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

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

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

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

II. Chronic Toxicity Screening Phase Requirements

A. The Discharger shall perform screening phase monitoring:

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

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

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

1. Use of test species specified in Appendix E-2, attached, and use of the protocols referenced in those tables, or as approved by the Executive Officer.

2. Two stages:

a. Stage 1 shall consist of a minimum of one battery of tests conducted concurrently. Selection of the type of test species and minimum number of tests shall be based on Appendix E-2 (attached).
b. Stage 2 shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.

3. Appropriate controls.

4. Concurrent reference toxicant tests.

5. Dilution series of 100%, 85%, 70%, 50%, 25%, and 0 %, where "%" is percent effluent as discharged, or as otherwise approved by the Executive Officer.

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

APPENDIX E-2
SUMMARY OF TOXICITY TEST SPECIES REQUIREMENTS

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

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

Toxicity Test References:

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

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

3. Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-90/003. July 1994.

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

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

Toxicity Test Reference:

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

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

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

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

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

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

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

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

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

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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" fully apply to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the North San Mateo County Sanitation District Wastewater Treatment Plant:

Table F-1. Facility Information

WDID	2 417021001
CIWQS Place ID	244566
Discharger	North San Mateo County Sanitation District
Name of Facility	North San Mateo County Sanitation District Wastewater Treatment Plant and its wastewater collection system
Facility Address	153 Lake Merced Boulevard
	Daly City, CA 94015
	San Mateo County
Facility Contact, Title and Phone	Patrick Sweetland, Director, (650) 991-8200
Authorized Person to Sign and Submit Reports	Kevin Brown, Chief Plant Operator or Cynthia Royer, Manager of Technical Services, (650) 991-8200
Mailing Address	333 90th Street, Daly City, CA 94015
Billing Contact Person and Address	Kevin Brown, 650-991-8200, 153 Lake Merced Boulevard, Daily City, CA 94015
Legal Notice Contact Person and Address	Patricia E. Martel, 333 90th Street, Daly City, CA 94015 (650) 991-8127
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N
Reclamation Requirements	Order No. 96-011
Facility Permitted Flow	8 million gallons per day (mgd)
Facility Design Flow	10.3 mgd (average dry weather flow capacity) 25 mgd (wet weather peak capacity)
Watershed	North San Mateo Coastal Watershed
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean waters

A. The North San Mateo County Sanitation District (hereinafter Discharger) is the owner and operator of the North San Mateo County Sanitation District Wastewater Treatment Plant (Plant)

and its wastewater collection system (hereinafter collectively Facility), a publicly owned treatment works.

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

B. The Facility discharges secondary treated wastewater to the Pacific Ocean, a water of the United States, and is currently regulated by Order R2-2006-0068, which was adopted on October 11, 2006 and expired on November 30, 2011.

C. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for renewal of its waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on June 2, 2011. The application was deemed complete and the previous Order was administratively extended.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Sludge Treatment or Controls

1. **Facility Overview.** The Discharger owns and operates the Facility, which provides secondary treatment of domestic wastewater from the City of Daly City, portions of San Mateo County, the Town of Colma, the San Francisco County Jail, and the Westborough Water District within the City of South San Francisco. The combined service area population is about 126,700.

   The treatment system consists of screening, compaction, primary clarification, flow equalization, pure oxygen activated sludge aeration, secondary clarification, chlorination by sodium hypochlorite, and dechlorination by sodium bisulfate. The Plant has an average dry weather design capacity of 10.3 mgd and a peak wet weather capacity of 25 mgd. The Discharger operates the Plant and discharges at or below the permitted flow rate of 8 mgd (averaged over 3 consecutive dry weather months) and does not anticipate a need to increase the permitted flow rate in the next five years.

   A portion of the effluent receives tertiary treatment for water reclamation projects. The tertiary treatment system includes alum or polymer injection followed by sand filtration, disinfection, gypsum injection and a 1.4 million gallon storage basin. Tertiary treatment provides up to 2.77 mgd of recycled water during the dry season for uses such as, but not limited to golf courses, median strips and parks.

2. **Treatment Processes.** Flow into the Plant is measured with a Parshall flume, and then flows through two microscreens, where it is dispersed evenly to six primary basins. Two additional primary basins are only brought into service when needed during wet weather flows. The primary effluent is then split, with 70% pumped to two pure oxygen activated sludge reactors that each has three turbine mixers. The other 30% is stored in equalization basins until late evening when it is pumped back into the secondary system for treatment. Flows from the activated sludge basins are then dispersed between three secondary clarifiers for settling. The effluent then flows over weirs into a chlorine contact mixing chamber.

3. **Sludge Treatment and Biosolids Disposal.** During the wastewater treatment process, the primary basins collect settleable solids in a sump, from which they are pumped to two gravity thickeners where ferrous chloride is added. The thickened solids are removed and pumped to two anaerobic digesters. Overflow from the gravity thickeners flows back to the headworks. Primary and secondary scum is pumped to an air flotation tank, along with the waste activated sludge, and treated with a polymer. The thickened sludge is pumped to an anaerobic digester, while the overflow goes into the primary effluent sump and is pumped to the secondary system.

   Digester temperatures are kept at 95° to 100°F. The laboratory performs total solids and volatile solids tests each day to confirm vector reduction. The digested solids are then treated with polymer and centrifuged. The centrate from the centrifuge flows into the headworks. Dried biosolids are pumped to a storage silo, and then hauled offsite for disposal at either the Potrero Hills municipal landfill in Suisin City, CA, or for land application at one of several farms (Hamilton Farms SO 00002, Emigh Ranch SO 00004, McCormack Ranch SO 00021, Emigh Souza Ranch SO 00022, Mayhood Ranch SO 00023, Menefee Ranch ME 00030, Pombo Ranch ME 00024, Silva Ranch I and II) in Solano, Merced, and Sacramento counties.

4. **Collection System.** Approximately 180 miles of sanitary sewer lines and eight lift stations convey domestic sewage to the Facility. Approximately 0.6 mgd of flow is discharged to the Southeast Water Pollution Control Plant (NPDES No. CA0037664) in San Francisco for treatment and disposal; therefore, this separate collection system is not part of the Facility.

5. **Pretreatment Program Exemption.** The Discharger is exempt from pretreatment requirements under 40 CFR Part 403. A pretreatment program for the Facility was certified on June 17, 1983. By letter dated January 4, 1995, the Discharger requested that its pretreatment program be decertified and removed from the Federal Pretreatment Program. All discharges to the Facility are either domestic or commercial in nature; there are no significant industrial users.

B. Discharge Points and Receiving Waters

The Facility discharges an annual average flow of approximately 7.1 mgd. Treated wastewater is conveyed through the Vista Grande Tunnel structure and a 27 inch force main located at Fort Funston in San Francisco County. Treated wastewater is then discharged through a submerged diffuser extending 2,500 feet from the shoreline and terminating at a depth of approximately 32 feet (-32 MLLW). The structure terminates as a 200-foot diffuser with 13 alternating ports. Each port is fitted with an 8-inch Proco Style 730 ProFlex sleeved rubber check valve installed in 2011. The ports are spaced at 16-foot intervals along the diffuser manifold length and discharge at a 45-degree angle to vertical. An initial dilution ratio of 115:1 is achieved. During the dry season, approximately 2.77 mgd of the effluent is reserved; it receives tertiary treatment for water reclamation projects.

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

Effluent limitations contained in Order No. R2-2006-0068 (the previous Order) for discharges from Discharge Point 001 and representative monitoring data from the December 2006 through July 2011 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation					Monitoring Data (From 12/2006 to 7/2011)				
		Six-Month Median	Average Monthly	Average Weekly	Daily Max	Inst. Max	Maximum Average Monthly	Maximum 6-Month Median	Maximum Average Weekly	Daily Max	Inst. Max
Carbonaceous Biochemical Oxygen Demand (5-Day @ 20º C)(CBOD)	mg/L	--	25	40	50	--	26	--	34	40	
Total Suspended Solids (TSS)	mg/L	--	30	45	60	--	50	--	82	330	
Oil & Grease	mg/L	--	25	40	--	75	12	--	12	12	
Settleable Solids	mL/L-hr	--	1.0	1.5	--	3.0	<0.3	--	0.6	0.8	
Total Chlorine Residual	mg/L	0.14	--	--	0.57	4.3	<0.01	0.12	0.012	0.12	3.8
	kg/d	4.2	--	--	17	--	--	--	--	--	--
Turbidity	NTU	--	75	100	--	225	19	--	44	112	--
pH	s.u.	Within a range of 6.0 – 9.0					6.1 – 7.7				
Chronic Toxicity	TU_c	--	--	--	71	--	--	--	--	40	
Enterococcus bacteria	MPN/100 mL	Single sample maximum 7400, 5-sample geometric mean maximum 2500					Maximum 7600, 5-sample maximum 975				

D. Compliance with Numeric Effluent Limitations

During the term of the previous order, the Discharger reported nine violations of numeric effluent limitations, as listed below. The seven events occurring in July 2011 were the result of one incident at the Plant. They occurred during a multi-phase construction retrofit of the Discharger's three secondary clarifiers. On July 13 and 14, the Discharger prepared for a mock shutdown of the Return Activated Sludge (RAS) system in advance of replacing the RAS pumps, motor, and piping. When the Discharger returned the system to normal operation, it found the main RAS valve (due to be replaced on July 19) to be broken. As a result, the TSS samples on July 16, 17, and 18 were above effluent limits. On July 19, the Discharger replaced the valve and re-established compliance. Regional Water Board staff is considering enforcement options.

Table F-3. Numeric Violations during December 2006 - July 2011

Date of Violation	Parameter	Limit	Reported Value	Units	CIWQS ID
1/11/2008	Enterococcus Bacteria	Daily maximum not to exceed 7400 MPN/100ML	7600	MPN/100mL	821648
2/28/2008	$CBOD_5$	Monthly Average not to exceed 25 mg/L	26	mg/L	821649
7/16/2011	TSS	Daily average not to exceed 60 mg/L	100	mg/L	907695
7/16/2011	TSS	Weekly average not to exceed 45 mg/L	69	mg/L	907702
7/17/2011	TSS	Daily average not to exceed 60 mg/L	330	mg/L	907700
7/18/2011	TSS	Daily average not to exceed 60 mg/L	90	mg/L	907701
7/23/2011	TSS	Weekly average not to exceed 45 mg/L	82	mg/L	907705
7/31/2011	TSS	Monthly Average not to exceed 30 mg/L	50	mg/L	907706
7/31/2011	TSS	Monthly Percent Removal not to be less than 85%	81	mg/L	907707

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to Clean Water Act (CWA) section 402 and USEPA's implementing regulations, and CWC Chapter 5.5, Division 7 (commencing with section 13370). It serves as an NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as WDRs pursuant to CWC Article 4, Chapter 4, Division 7 (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from CEQA Chapter 3.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The *Water Quality Control Plan for the San Francisco Bay Basin* (hereinafter Basin Plan) is the Regional Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes implementation programs to achieve water quality objectives. The Basin Plan was adopted by the Regional Water Board, and approved by the State Water Resources Control Board (hereinafter State Water Board), the Office of Administrative Law, and USEPA. Requirements of this Order implement the Basin Plan. Table F-4 below, lists the beneficial uses for coastal waters as described in the Basin Plan.

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	San Mateo Coastal Basin, Pacific Ocean	Industrial Service Supply (IND) Ocean, Commercial, and Sport Fishing (COMM) Shellfish Harvesting (SHELL) Marine Habitat; (MAR) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Noncontact Water Recreation (REC2) Navigation (NAV)

2. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (hereinafter Ocean Plan) in 1972 and amended it several times, most recently in 2009. The most recent changes became effective on March 10, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below. To protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. The Basin Plan incorporates by reference the provisions of the Ocean Plan. Requirements of this Order implement the Ocean Plan.

   Table F-5 summarizes the beneficial uses of the Pacific Ocean identified in the Ocean Plan.

Table F-5. Ocean Plan Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	Industrial Water Supply Water Contact and Non-Contact Recreation, Including Aesthetic Enjoyment Navigation Commercial and Sport Fishing Mariculture Preservation and Enhancement of Designated Areas of Special Biological Significance (ASBS) Fish Migration Rare and Endangered Species Marine Habitat Fish Spawning and Shellfish Harvesting

3. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (65 Fed. Reg. 24641 [April 27, 2000], codified at 40 CFR 131.21). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The 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.

4. **Antidegradation Policy.** NPDES regulations at 40 CFR 131.12 requires that State water quality standards include an antidegradation policy consistent with federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution 68-16, which incorporates federal policy where federal policy applies. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both State and federal antidegradation policies.

5. **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 effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous permit (Order No. R2-2006-0068), with the exception of chronic toxicity, carbonaceous biochemical oxygen demand, total suspended solids, oil and grease, settleable solids, turbidity, as discussed in section IV.D.1.

6. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of applicable State and federal law pertaining to threatened and endangered species.

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

The Pacific Ocean at Fort Funston is not on the 303(d) list as an impaired water body.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the NPDES regulations: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative WQOs to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric objective for the pollutant, WQBELs must 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 except as described in this Order).** This prohibition is based on 40 CFR 122.21(a), Duty to Apply, and CWC section 13260, which requires filing

an application and Report of Waste Discharge before discharges can occur. Discharges not described in the permit application and Report of Waste Discharge, and subsequently in this Order, are prohibited.

2. **Prohibition III.B (Minimum initial dilution of 115:1).** The Order allows a dilution credit of 115:1 in the calculation of one or more water quality-based effluent limitations, based on information of dilution achieved by the Discharger's current outfall. Thus, this prohibition is necessary to ensure that the assumptions used to derive the dilution credit remain substantially the same so that the limitations are protective of water quality.

3. **Prohibition III.C (No discharge in excess of permitted flow).** This prohibition prohibits flows in excess of the Facility's permitted average dry weather flow of 8.0 mgd. This prohibition ensures adequate treatment of wastewater in all circumstances anticipated by the Facility's design. Although the Discharger does not anticipate needing its full design capacity during this permit term, there may be a time in the future when additional capacity is needed. At that time, an antidegradation analysis will be required to ensure compliance with State and federal antidegradation policies prior to Regional Water Board consideration of a permit amendment to allow an increase in permitted flow.

4. **Prohibition III.D (No discharge of untreated or partially treated wastewater or sludge [biosolids] or untreated supernatant).** This prohibition is based on 40 CFR 122.41(m) and Ocean Plan section III.I.3.

5. **Prohibition III.E (No sanitary sewer overflows to waters of the United States).** CWA prohibit 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 necessary to meet water quality standards. [33 U.S.C. § 1311 (b)(1)(B and C)] Therefore, a sanitary sewer overflow that results in the discharge of raw sewage, or sewage not meeting effluent limitations required by the Order, to surface waters is prohibited under the CWA.

B. Technology-Based Effluent Limitations

1. Scope and Authority

CWA Section 301(b) requires USEPA to develop secondary treatment standards for publicly-owned treatment works at a level of effluent quality attainable through applying secondary or equivalent treatment. USEPA promulgated such technology-based effluent guidelines at 40 CFR 133. These secondary treatment regulations include the following minimum requirements:

Table F-6. Secondary Treatment Requirements

Parameter	Units	30-Day Average	7-Day Average
CBOD[(1)]	mg/L	25[(2)]	40
TSS	mg/L	30[(2)]	45
pH	Standard units	6.0 – 9.0	

(1) The CBOD requirements in Table F-5 may be substituted in lieu of the requirements for BOD. This is consistent with secondary treatment standards in 40 CFR 133.

(2) The average monthly percent removal of CBOD and TSS shall not be less than 85 percent.

2. Technology-Based Effluent Limitations

a. **Carbonaceous Biochemical Oxygen Demand (5-day, $CBOD_5$).** Secondary treatment requirements at 40 CFR 133.102(a) require effluent limitations for BOD or, as a substitute, CBOD (40 CFR 133.102(a)(1)). Effluent limitations for $CBOD_5$ (except daily average limit), including 85 percent removal, are retained from the previous Order and are based on secondary treatment requirements at 40 CFR 133.102(a). This Order does not retain the previous Order's average daily limitation, for which we could find no basis and which is inconsistent with 40 CFR 122.45(d).

b. **Total Suspended Solids (TSS).** Effluent limitations for TSS (except the daily average limitation), including 85 percent removal, are retained from the previous Order. These limitations are based on secondary treatment requirements at 40 CFR 133.102(b). This Order doesn't retain the previous Order's average daily limitation for which we could find no basis and which is inconsistent with 40 CFR 122.45(d).

c. **pH.** Effluent limitation is retained from the previous Order and based on 40 CFR 133 and Ocean Plan Table A.

C. Water Quality-Based Effluent Limitations (WQBELs)

WQBELs have been 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. The procedures for calculating the individual WQBELs are based on the Ocean Plan. The Ocean Plan and most Basin Plan beneficial uses and water quality objectives 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). Collectively, this Order's restrictions on individual pollutants are no more stringent than the CWA requires.

1. Scope and Authority

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have a reasonable potential to cause or contribute to an excursion of a WQS, including numeric and narrative objectives within a standard. As specified in 40 CFR 122.44(d)(1)(i), permits are required to include WQBELs for all pollutants that the Regional Water Board 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 state water quality standard.

The process for determining "reasonable potential" and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the receiving water as specified in the Basin Plan and the Ocean Plan, and achieve applicable Ocean Plan water quality objectives

2. Beneficial Uses and Water Quality Objectives

The water quality objectives applicable to the receiving water for this discharge are from Ocean Plan section II, which includes the numeric water quality objectives in Ocean Plan Table B. The Basin Plan incorporates these objectives for ocean waters by reference.

3. Minimum Initial Dilution

In accordance with the Ocean Plan, WQBELs reflect the minimum initial dilution of the effluent as it reaches the receiving water. The minimum initial dilution can be estimated by experimental observation and computer simulation. The previous Order used a dilution credit of 70:1, developed in the 1990s, for reasonable potential analysis and effluent limit calculation. The Discharger provided an updated study in a November 9, 2011, Technical Memorandum, *Dilution Modeling of NSMCSD Outfall: Results of Dilution Modeling for Discharge to Pacific Ocean,* which estimated dilution under different flow conditions. For purposes of this Order, the dilution factor is based on the maximum discharge flow over the past five years, 11.5 mgd, and an ocean current speed of 0.47 feet/second (fps), which is the 10th percentile of the 30-day average of hourly values for NOAA Station 46011 (Santa Maria) for the period 2005-2008. The Ocean Plan requires that dilution estimates be based on the assumption of no currents; however, it also says dischargers may propose alternative methods of calculating dilution if acceptable to the Regional Water Board. The resulting initial dilution (at near field, 30 feet from the outfall ports) is at least 115:1. This dilution credit was used for reasonable potential analysis and WQBELs calculation.

4. Determining the Need for WQBELs

a. **Reasonable Potential Analysis (RPA) Procedure.** The RPA is based on the procedure described in Ocean Plan Appendix VI. In general, the procedure is a statistical method that evaluates an effluent data set while taking into account the averaging period of water quality objectives, the long term variability of pollutants in the effluent, limitations associated with sparse data sets, and uncertainty associated with censored data sets. The procedure assumes a lognormal distribution of the effluent data and compares the 95th percentile concentration at 95 percent confidence for each pollutant in Ocean Plan Table B, accounting for dilution, to the applicable water quality objectives in Ocean Plan Table B. The RPA results in one of three endpoints from the four triggers in the Ocean Plan:

Endpoint 1 – There is "reasonable potential." A WQBEL and monitoring are required.

Endpoint 2 – There is no "reasonable potential." A WQBEL is not required, but monitoring may be required.

Endpoint 3 – The analysis is inconclusive. There are less than 3 detected values or more than 80% of samples are non-detect (ND). Any existing WQBEL is retained, and monitoring is required.

The four triggers are:

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

For Table B pollutants, X = (Ce + Dm Cs) / (Dm + 1)

For acute toxicity, X = Ce / (0.1 Dm + 1);

where Ce is the effluent concentration

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

Cs is the background seawater concentration from Table C

(2) if there are three or more detected values and the number of nondetected (ND) values (c) are less than or equal to 80% of the total number of data points (n), i.e, c/n ≤ 80%, a parametric RPA is performed. If the calculated UCB (as defined in c below) is greater than Co, then Endpoint 1 is concluded; otherwise Endpoint 2 is concluded. Assume data are lognormally distributed, unless otherwise demonstrated:

a. If the data consist entirely of detected values (c/n = 0), calculate summary statistics M_L and S_L, the mean and standard deviation of the natural logarithm transformed effluent data expected after complete mixing, ln(X);

b. If the data are censored by 80% or less (c/n < 0.8), calculate summary statistics M_L and S_L using the censored data analysis method of Helsel and Cohn (1988);

c. Calculate the UCB (upper confidence bound), i.e., the one-sided, upper 95 percent confidence bound for the 95th percentile of the effluent distribution after complete mixing. For lognormal distributions, use UCB_L (.95, .95) = exp(M_L + S_L g'(.95,.95,n)), where g' is a normal tolerance factor obtained from the Table VI-1 of the Ocean Plan, Appendix VI.

(3) If there are less than three detected values or if there are more than three detected values but the percentage of non-detected (ND) values are more than 80%, i.e., c/n>80%, perform a non-parametric RPA.

Compare each data value X to Co. Reduce the sample size n by 1 for each tie (i.e., inconclusive censored value result) present. An adjusted ND value having Co< MDL is a tie. An adjusted DNQ value having Co < ML is also a tie. If the adjusted n > 15, *Endpoint 2 is conclude*. Otherwise, *Endpoint 3* is concluded.

(4) Additionally, if there is any information about the receiving water body or the discharge support a reasonable potential assessment (RPA) without characterizing facility-specific effluent monitoring data, then conduct an RPA based on best professional judgment (BPJ). Review all available information to determine if WQBEL is required to protect beneficial uses. Information that may be used includes: the facility type, the discharge type, solids loading analysis, lack of dilution, history of compliance problems, potential toxic impact of discharge, fish tissue residue data, water quality and beneficial uses of the receiving water, CWA 303(d) listing for the pollutant, the presence of endangered or threatened species or critical habitat, and other information.

If data or other information is unavailable or insufficient to determine if a WQBEL is required, Endpoint 3 is concluded. Otherwise, either Endpoint 1 or Endpoint 2 based on best professional judgment is concluded.

b. Effluent Data. The RPA is based on effluent monitoring data collected during 2006 through 2010 at Discharge Point 001 for the Table B pollutants, except for total chlorine residual and ammonia, for which January 2006 through February 2011 data were used.

c. Background Data. Site-specific background water quality data are unavailable. Therefore, in accordance with Ocean Plan Table B implementation procedures, background concentrations for all pollutants are assumed to equal zero, except those listed in Ocean Plan Table C.

d. RPA Results. The following table presents results of the RPA, performed in accordance with Ocean Plan procedures. The endpoint for each Table B pollutant is identified. The RPA showed "reasonable potential" for total chlorine residual. As the following table shows, the RPA commonly leads to Endpoint 3, meaning that the RPA is inconclusive, when a majority of the effluent data is reported as ND (not detected). In these circumstances, the "inconclusive" result is generally an indication of no concern for a particular pollutant; however, additional monitoring are required for such pollutants during the term of this Order.

Table F-7. Reasonable Potential Analysis Results

Table B Pollutant	Most Stringent WQO (µg/L)[1]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After mixing (µg/L)	Projected 95th percentile (µg/L)	RPA Result, Comment
Objectives for Protection of Marine Aquatic Life							
Arsenic	8	5	3	0.88 (DNQ)	0.0076 (DNQ)	---	Endpoint 3 – RPA is Inconclusive
Cadmium	1	5	5	<0.5	<0.0043	---	Endpoint 3 – RPA is Inconclusive
Chlorinated Phenolics[2]	1	5	5	<16	<0.14	---	Endpoint 3 – RPA is Inconclusive
Chromium (VI)	2	5	5	<5	<0.043	---	Endpoint 3 – RPA is Inconclusive
Copper	3	5	0	12	2.1	2.2	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO
Cyanide	1	5	5	<4	<0.034	---	Endpoint 3 – RPA is Inconclusive, less than 3 detects or greater than 80% ND
Total Chlorine Residual[3]	2	1,369	1,359	1280	11	---	Max expected conc. >Co, Endpoint 1 - An effluent limitation must be developed for the pollutant.
Acute Toxicity	0.3 TUa	NA	NA	NA	NA	---	Endpoint 3 – RPA is Inconclusive, less than 3 detects or greater than 80% ND
Chronic Toxicity	1 TU_c	22	0	40 TU_c	0.35	0.5	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO.
Ammonia (as N)	600	130	0	67,000	580	520	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO.
Endosulfan[4]	0.009	5	5	<0.0022	<1.9E-5	---	Endpoint 3 – RPA is Inconclusive
Endrin	0.002	5	5	<0.0053	<4.6E-5	---	Endpoint 3 – RPA is Inconclusive
HCH[5]	0.004	5	5	<0.0031	<2.6E-5	---	Endpoint 3 – RPA is Inconclusive
Lead	2	5	4	2.30	0.020	---	Endpoint 3 – RPA is Inconclusive

Table B Pollutant	Most Stringent WQO (µg/L)(1)	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After mixing (µg/L)	Projected 95th percentile (µg/L)	RPA Result, Comment
					(DNQ)		
Mercury	0.04	5	5	<0.2	<0.0022	---	Endpoint 3 – RPA is Inconclusive
Nickel	5	5	1	4.9	0.042 (DNQ)	---	Endpoint 3 – RPA is Inconclusive
Non-chlorinated Phenolics(6)	30	5	5	<0.12	<0.0010	---	Endpoint 3 – RPA is Inconclusive
Selenium	15	5	5	<1	<0.0086	---	Endpoint 3 – RPA is Inconclusive
Silver	0.7	5	5	<2	<0.18	---	Endpoint 3 – RPA is Inconclusive
Zinc	20	5	0	150	9.2	9.2	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO
Objectives for Protection of Human Health – Noncarcinogens							
1,1,1-Trichloroethane	540,000	5	5	<0.36	<0.0031	---	Endpoint 3 – RPA is Inconclusive
2,4-Dinitrophenol	4.0	5	5	<1.3	<0.011	---	Endpoint 3 – RPA is Inconclusive
2-Methyl-4,6-Dinitrophenol	220	5	5	<0.1	<0.00086	---	Endpoint 3 – RPA is Inconclusive
Acrolein	220	5	5	<0.6	<0.0052	---	Endpoint 3 – RPA is Inconclusive
Antimony	1,200	5	5	18 (DNQ)	0.15	---	Endpoint 3 – RPA is Inconclusive
Bis(2-Chloroethoxy) Methane	4.4	5	5	<0.81	<0.0070	---	Endpoint 3 – RPA is Inconclusive
Bis(2-Chloroisopropyl)Ether	1,200	5	5	<0.46	<0.0040	---	Endpoint 3 – RPA is Inconclusive
Chlorobenzene	570	5	5	<2	<0.017	---	Endpoint 3 – RPA is Inconclusive
Chromium (III)	190,000	5	5	<3	<0.026	---	Endpoint 3 – RPA is Inconclusive
Dichlorobenzenes(7)	5,100	5	5	<5	<0.043	---	Endpoint 3 – RPA is Inconclusive
Diethyl Phthalate	33,000	5	5	<0.86	<0.0074	---	Endpoint 3 – RPA is Inconclusive
Dimethyl Phthalate	820,000	5	5	<0.68	<0.0059	---	Endpoint 3 – RPA is Inconclusive
Di-n-Butyl Phthalate	3,500	5	5	<0.91	<0.0078	---	Endpoint 3 – RPA is Inconclusive
Ethylbenzene	4,100	5	5	<0.44	<0.0038	---	Endpoint 3 – RPA is Inconclusive
Fluoranthene	15	5	5	<0.76	<0.0066	---	Endpoint 3 – RPA is Inconclusive
Hexachlorocyclopentadiene	58	5	5	<0.7	<0.0060	---	Endpoint 3 – RPA is Inconclusive
Nitrobenzene	4.9	5	5	<0.74	<0.0064	---	Endpoint 3 – RPA is Inconclusive
Thallium	2	5	5	<0.9	<0.0078	---	Endpoint 3 – RPA is Inconclusive
Toluene	85,000	5	2	0.84	0.0072	0.015	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO
Tributyltin	0.0014	5	3	0.004	0.000056	---	Endpoint 3 – RPA is Inconclusive
Objectives for Protection of Human Health – Carcinogens							
1,1,2,2-Tetrachloroethane	2.3	5	5	<0.85	<0.0073	---	Endpoint 3 – RPA is Inconclusive
1,1,2-Trichloroethane	9.4	5	5	<2.4	<0.021	---	Endpoint 3 – RPA is Inconclusive
1,1-Dichloroethylene	0.9	5	5	<0.7	<0.0060	---	Endpoint 3 – RPA is Inconclusive
1,2-Dichloroethane	28	5	5	<2.1	<0.018	---	Endpoint 3 – RPA is Inconclusive
1,2-Diphenylhydrazine	0.16	5	5	<0.33	<0.0028	---	Endpoint 3 – RPA is Inconclusive
1,3-Dichloropropylene	8.9	5	5	<2.5	<0.022	---	Endpoint 3 – RPA is Inconclusive
1,4 Dichlorobenzene	18	5	3	2.2	0.019	---	Endpoint 3 – RPA is Inconclusive
TCDD Equivalents(8)	3.9×10^{-9}	5	5	ND	ND	---	Endpoint 3 – RPA is Inconclusive
2,4,6-Trichlorophenol	0.29	5	5	<0.74	<0.0064	---	Endpoint 3 – RPA is Inconclusive
2,4-Dinitrotoluene	2.6	5	5	<0.68	<0.0059	---	Endpoint 3 – RPA is Inconclusive
3,3'-Dichlorobenzidine	0.0081	5	5	<2	<0.017	---	Endpoint 3 – RPA is Inconclusive
Acrylonitrile	0.10	5	5	<0.21	<0.0018	---	Endpoint 3 – RPA is Inconclusive
Aldrin	2.2×10^{-5}	5	5	<0.0045	<3.9E-5	---	Endpoint 3 – RPA is Inconclusive

Table B Pollutant	Most Stringent WQO (µg/L)[1]	No. of Samples	No. of Non-Detects	Max Effluent Conc. (µg/L)	Max Expected Conc. After mixing (µg/L)	Projected 95th percentile (µg/L)	RPA Result, Comment
Benzene	5.9	5	5	<0.23	<0.0020	---	Endpoint 3 – RPA is Inconclusive
Benzidine	$6.9x10^{-5}$	5	5	<0.34	<0.0029	---	Endpoint 3 – RPA is Inconclusive
Beryllium	0.033	5	5	<0.2	<0.0017	---	Endpoint 3 – RPA is Inconclusive
Bis(2-Chloroethyl)Ether	0.045	5	5	<0.43	<0.0037	---	Endpoint 3 – RPA is Inconclusive
Bis(2-Ethylhexyl)Phthalate	3.5	5	1	3.9	0.034	0.055	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO
Carbon Tetrachloride	0.90	5	5	<0.3	<0.0026	---	Endpoint 3 – RPA is Inconclusive
Chlordane[9]	$2.3x10^{-5}$	5	5	<0.1	<0.00086	---	Endpoint 3 – RPA is Inconclusive
Chlorodibromomethane	8.6	5	4	0.37	0.0032	---	Endpoint 3 – RPA is Inconclusive
Chloroform	130	5	0	3.6	0.031	0.034	Endpoint 2 – No Reasonable Potential, 95th percentile less than WQO
DDT[10]	0.00017	5	5	<0.15	<0.0013	---	Endpoint 3 – RPA is Inconclusive
Dichlorobromomethane	6.2	5	4	0.45	0.0039	---	Endpoint 3 – RPA is Inconclusive
Dieldrin	0.00004	5	5	<0.004	<3.4E-5	---	Endpoint 3 – RPA is Inconclusive
Halomethanes[11]	130	5	5	<7.5	<0.065	---	Endpoint 3 – RPA is Inconclusive
Heptachlor	0.00005	7	7	<0.0056	<4.8E-5	---	Endpoint 3 – RPA is Inconclusive
Heptachlor Epoxide	0.00002	5	5	<0.0049	<4.2E-5	---	Endpoint 3 – RPA is Inconclusive
Hexachlorobenzene	0.00021	5	5	<0.0027	<2.3E-5	---	Endpoint 3 – RPA is Inconclusive
Hexachlorobutadiene	14	5	5	<0.84	<0.0072	---	Endpoint 3 – RPA is Inconclusive
Hexachloroethane	2.5	5	5	<0.58	<0.0005	---	Endpoint 3 – RPA is Inconclusive
Isophorone	730	5	5	<0.81	<0.0070	---	Endpoint 3 – RPA is Inconclusive
Methylene Chloride	450	5	3	1.4	0.012	---	Endpoint 3 – RPA is Inconclusive
N-Nitrosodimethylamine	7.3	5	5	<1.1	<0.0095	---	Endpoint 3 – RPA is Inconclusive
N-Nitrosodi-n-Propylamine	0.38	5	5	<0.85	<0.0073	---	Endpoint 3 – RPA is Inconclusive
N-Nitrosodiphenylamine	2.5	5	5	<0.9	<0.0078	---	Endpoint 3 – RPA is Inconclusive
PAHs[12]	0.0088	5	5	<2.47	<0.021	---	Endpoint 3 – RPA is Inconclusive
PCBs	1.9E-5	5	5	<3.5	<0.030	---	Endpoint 3 – RPA is Inconclusive
Tetrachloroethylene	2.0	5	5	<0.33	<0.0028	---	Endpoint 3 – RPA is Inconclusive
Toxaphene	0.00021	5	5	<0.45	<0.0039	---	Endpoint 3 – RPA is Inconclusive
Trichloroethylene	27	5	5	<2.4	<0.021	---	Endpoint 3 – RPA is Inconclusive
Vinyl Chloride	36	5	5	<1.6	<0.014	---	Endpoint 3 – RPA is Inconclusive
Hexachloroethane	2.5	5	5	<0.58	<0.0050	---	Endpoint 3 – RPA is Inconclusive

Footnotes:

(1) Units are µg/L unless otherwise noted.

(2) Chlorinated phenolics includes the sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol.

(3) Endpoint 1 was determined on the basis of best professional judgment in accordance with Step 13 of Ocean Plan Appendix VI.

(4) Endosulfan includes the sum of alpha-endosulfan, beta-endosulfan, and endosulfan sulfate.

(5) HCH includes the sum of the alpha, beta, gamma (Lindane) and delta isomers of hexachlorocyclohexane.

(6) Non-chlorinated phenolics include the sum of 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 4-nitrophenol, and phenol.

(7) Dichlorobenzenes includes the sum of 1,2-dichlorobenzene and 1,3-dichlorobenzene.

(8) TCDD Equivalents include the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,4,8-CDFs) multiplied by their respective toxicity equivalency factors as shown in Ocean Plan Appendix I. Although some congers were detected above the detection limits of the analytical methods, they were all below the minimum levels stated in Attachment G of the Order. Therefore, the TCDD equivalents are treated as non-detects (NDs), and the RPA is inconclusive according to the Ocean Plan.

(9) Chlordane includes the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, oxychlordane.

(10) DDT includes the sum of 4,4'DDT, 2,4'DDT, 4,4'DDE, 2,4'DDE, 4,4'DDD, and 2,4'DDD.
(11) Halomethanes includes the sum of bromoform, bromomethane (methyl bromide), and chloromethane (methyl chloride).
(12) PAHs (or polynuclear aromatic hydrocarbons) includes the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

5. WQBEL Calculations

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

$$Ce = Co + Dm (Co - Cs)$$

Where:

Ce = the effluent limitation (µg/L)

Co = the concentration (the WQO) to be met at the completion of initial dilution (µg/L).

Cs = background seawater concentration (µg/L)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

Except for the five metals in the table below, background concentrations of all Table B pollutants are considered to be zero (Cs = 0)

Background Seawater Concentrations

Pollutant	Cs (µg/L)
Arsenic	3.0
Copper	2.0
Mercury	0.0005
Silver	0.16
Zinc	8.0

a. Total Chlorine Residual

The effluent limitations for total chorine residual are based on the following Ocean Plan WQOs:

Pollutant	Units	6-month Median	Daily Maximum	Instantaneous Maximum
Total Chlorine Residual	µg/L	2	8	60

Using the equation, Ce = Co + Dm (Co – Cs), effluent limitations are calculated as follows:

6-month median:	Ce = 2 + 115 (2 – 0.0) = 232 µg/L (0.23 mg/L)
Daily maximum:	Ce = 8 + 115 (8 – 0.0) = 928 µg/L (0.93 mg/L)
Instantaneous maximum:	Ce = 60 + 115 (60 – 0.0) = 6960 µg/L (7.0 mg/L)

The previous permit contained more stringent effluent limits: 6-month median, 0.14 mg/L; daily maximum, 0.57 mg/L; and instantaneous maximum, 4.3 mg/L. The Discharger has been able to comply with those effluent limits; therefore, this Order retains them to comply with anti-backsliding requirements.

Ocean Plan also requires mass emission limitations for Table B WQOs. The previous Order includes more stringent mass emissions calculated using the previous concentration-based limits and a dry weather flow of 8.0 mgd. The Discharger has been able to comply with them. Therefore, this Order retains the old mass emission limits, which are 4.2 kg/day as 6-month median, and 17 kg/day as daily maximum.

b. Bacteria Effluent Limitations

Total coliform, fecal coliform, and enterococcus are known pollutants of concern within effluent from wastewater treatment facilities. The effluent limitations for enterococcus bacteria are based on the Ocean Plan for water contact recreation, specifically the 30-day geometric mean enterococcus density, which is not exceed 35 per 100 mL, and the single sample maximum, which is not to exceed 104 per 100 mL. Using the Ocean Plan equation, Ce = Co + Dm (Co – Cs), to account for dilution, effluent limitations for enterococcus are calculated as follows:

30-day geometric mean:	Ce = 35 + 115 (35 – 0.0) = 4,060 MPN/100 mL
Single sample maximum:	Ce = 104 + 115 (104 – 0.0) = 12,064 MPN/100 mL

The previous permit contains enterococcus effluent limits, 2,500 MPN/100 ml as 30-day geometric mean, and 7,400 MPN/100 ml as single sample maximum. The Discharger's effluent data show that they can comply with these effluent limits; therefore, this Order retains these effluent limits.

The Ocean Plan WQOs for total and fecal coliform are implemented through receiving water limitations.

Shellfish are not harvested for human consumption in the vicinity of the discharge because of inaccessibility; therefore, shellfish harvesting water quality objectives do not apply. Near the outfall, access to the shoreline is difficult, and no evidence indicates that the Fort Funston / Ocean Beach shoreline areas support recreational shellfish harvesting. No commercial shellfish beds are located nearby.

D. Anti-Backsliding and Antidegradation

1. Consistent with the requirements of CWA sections 402(o)(2) and 303(d)(4) and 40 CFR 122.44(l), this Order retains effluent limitations no less stringent than those established by the previous order, with the exception of chronic toxicity, CBOD and TSS average daily limits, settleable solids, oil and grease, and turbidity.

This Order does not retain the effluent limitation for chronic toxicity. An RPA, conducted in accordance with the procedures specified in Ocean Plan Appendix VI, results in no reasonable potential for chronic toxicity. As such, the effluent limitation for chronic toxicity has been removed and degradation of the receiving water is not expected. The removal of an effluent limitation for chronic toxicity based on new effluent data is consistent with State Water Board Order No. WQ 2001-16 and degradation is not expected because the Discharger must at a minimum maintain its current level of treatment during the permit term in order to comply with requirements that are retained (e.g. proper operation and maintain of treatment facilities, and TSS and CBOD limits).

This Order does not retain the daily average limits for $CBOD_5$ and TSS. The daily average limits (equivalent to daily maximum limits) for $CBOD_5$ and TSS are inconsistent with federal secondary treatment standards. It is also inconsistent with 40 CFR 122.45(d) that excludes maximum daily limits for publically owned treatment works unless impracticable. The previous permit did not provide a legal basis and the only rationale was that they were retained from the permit before that one. This Order does not retain the effluent limits for oil and grease, settleable solids, and turbidity. These effluent limits are from Table A of the Ocean Plan, which only apply to POTWs for which effluent limitations guidelines have not been established pursuant to CWA sections 301, 302, 304, or 306. NPDES regulations at 40 CFR 133.102(a) establish CBOD and TSS effluent limits for secondary POTWs; therefore, these Table A limits do not apply to this facility, and were included previously in error. Removal of these effluent limits is exempt from antibacksliding pursuant to Clean Water Act 402(o)(2)(ii) to correct a technical or legal mistake in a technology based limitation. Compliance with anti-degradation is assured by retaining the same weekly and monthly technology-based limits as the previous permit for $CBOD_5$ and TSS. The Discharger consistently complied with these oil and grease, settleable solids, and oil and grease effluent limits, therefore, other requirements (TSS and CBOD limits) are maintaining water quality and preventing degradation.

2. NPDES regulations at 40 CFR 131.12 require that State water quality standards include an antidegradation policy consistent with federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution No. 68-16, which incorporates federal policy where federal policy applies. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings.

   The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. This Order continues the status quo with respect to the level of discharge authorized in the previous Order and thus there will be no change in water quality beyond the level that was authorized in the last permit. The limitations in this Order comply with antidegradation requirements and meet the requirements of the Ocean Plan because they hold the Dischargers to performance levels that will neither cause nor contribute to water quality impairment, nor further water quality degradation. This is because this Order does not provide for an increase in the permitted design flow, or allow for a reduced level of treatment.

   Because antidegradation requirements are met, there will be no lowering of water quality beyond the current level authorized in the previous Order, which is the baseline by which to

measure whether degradation will occur. Therefore, further analysis in this Order is unnecessary, and findings authorizing degradation are thus unnecessary.

V. RATIONALE FOR SURFACE RECEIVING WATER LIMITATIONS

Receiving Water Limitations V.A.1, V.A.2, and V.B.1 through V.B.15 are based on the narrative and numerical objectives contained in Ocean Plan section II, and the implementation provisions contained in Ocean Plan section III. They are consistent with the previous Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), 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.

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

4. prepare water and wastewater quality inventories.

The MRP is a standard requirement in NPDES permits, including this Order. It contains definitions of terms and sets out requirements for reporting of routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board's policies. The MRP also contains a sampling program specific for this 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 on-going characterization of influent, effluent, and receiving waters.

A. Influent Monitoring

Influent monitoring requirements for $CBOD_5$ and TSS are retained by this Order to allow determination of treatment removal (percent removal). Monitoring requirements for flow are retained from the previous Order.

B. Effluent Monitoring

1. Effluent monitoring requirements for the following parameters are retained from the previous Order: flow, $CBOD_5$, TSS, oil and grease, turbidity, temperature, DO, pH, total chlorine

residual, sulfides, and enterococcus bacteria. Monitoring for $CBOD_5$, TSS, pH, total chlorine residual, and enterococcus bacteria are necessary in order to measure compliance with effluent limitations contained in this Order. Monitoring for oil and grease, turbidity, temperature and DO may be used to assess the Discharger's compliance with receiving water limitations contained in this Order. Ammonia monitoring is necessary to assure availability of current ammonia discharge levels of the Plant.

2. Chronic toxicity monitoring, as required by Ocean Plan section III.C.4.c.(4), is included to evaluate the capacity of the discharge to cause or contribute to chronic aquatic toxicity in the receiving water. Because there is no reasonable potential for chronic toxicity, sampling for chronic toxicity has been reduced from once per quarter to once per year. Based on the current dilution ratio, the Ocean Plan does not require monitoring for acute toxicity.

3. Quarterly effluent monitoring for heptachlor has been discontinued since effluent data collected over the term of the previous permit did not indicate that the Discharger had reasonable potential to exceed the Ocean Plan Table B WQO. The Discharger will continue to monitor heptachlor during annual priority pollutant scans.

4. The MRP requires annual sampling of all priority pollutants listed in Ocean Plan Table B, as Ocean Plan Appendix III requires for dischargers with effluent volumes between 1 and 10 mgd. As previously discussed, more frequent monitoring is required for total chlorine residual and ammonia nitrogen. Sampling frequencies are based on the Discharger's average annual discharge rate of 7.0 mgd.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) tests are used to evaluate the aggregate toxic effect of a mixture of pollutants in the effluent on receiving water quality. Based on the initial dilution of the discharge (greater than 100:1), the Ocean Plan allows the Region Water Board to require acute toxicity tests. However, the Discharger conducted acute toxicity tests until 2006, and no acute toxicity was observed, therefore, there is no reasonable potential for acute toxicity (highest acute toxicity TUc = 1.02 vs. the objective adjusted for dilution, 3.8 TUc [Ce = Ca + (0.1) Dm (Ca) = 0.3+0.1*115*0.3 = 3.8 TUc]). Therefore, this Order does not require acute toxicity testing. The MRP requires chronic toxicity tests to evaluate mortality, reproduction, and growth over a longer period. The Ocean Plan requires chronic toxicity monitoring based on the discharge's initial dilution.

D. Other Monitoring Requirements

Monitoring Locations OV-1 through OV-*n*, used for overflows and bypasses, and associated monitoring requirements have been removed from the MRP because they duplicated existing requirements located in Attachments D and G.

E. Receiving Water Monitoring

The MRP retains all receiving water monitoring requirements from the previous permit. Monitoring results will be used to determine compliance with receiving water limits.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions (Provision VI.A)

Standard Provisions, which apply to all NPDES discharges and must be included in every NPDES permit in accordance with 40 CFR 122.41and 122.42, are provided in Attachment D of this Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. The Regional Standard Provisions (Attachment G) supplement the Federal Standard Provisions. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. MRP Requirements (Provision VI.B)

The Discharger is required to monitor the permitted discharges to evaluate compliance with permit conditions. Monitoring requirements are contained in the MRP (Attachment E), Standard Provisions (Attachment D), and Regional Standard Provisions (Attachment G). This provision requires compliance with these documents and is authorized by 40 CFR 122.41(h) and (j) and CWC sections 13267 and 13383.

The table below summarizes routine monitoring requirements. This table is for informational purposes only. Actual requirements are specified in the MRP and other applicable provisions of this Order.

Table F-8. Monitoring Requirements Summary

Parameter	Influent INF-001	Effluent EFF-001, EFF-001b, or EFF-002	Sludge and Biosolids	Receiving Water
Flow	Continuous	Continuous		
$CBOD_5$	1/Week	1/Week		
TSS	2/Week	2/Week		
Oil and Grease		1/Quarter		
pH		1/Day		1/Year
Turbidity		1/Day		
Chlorine, Total Residual		1/Hour		
Chronic Toxicity		1/Year		
Enterococcus		1Week		
Dissolved Oxygen		1/Day		1/Year
Temperature		1/Day		1/Year

Sulfides (if DO < 5.0 mg/L) Total and Dissolved		1/Day		
Total Ammonia as Nitrogen		2/Month		1/Year
Total Coliform				1/Year
Fecal Coliform				1/Year
Salinity				1/Year
TCDD Equivalents		1/Year		
Standard Observations		1/Day		
All Other Table B pollutants		1/Year		
Metric tons/year			See Attachment G Section III.B.1	
Arsenic, Cadmium, Copper, Mercury, Molybdenum, Nickel, Lead, Selenium, and Zinc			See Attachment G Section III.B.2.a	
Paint filter test			See Attachment G Section III.B.2.b	

C. Special Provisions

1. Reopener Provisions

These provisions are based on 40 CFR 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated WQOs, regulations, or other new relevant information that may be established in the future and other circumstances allowed by law.

2. Effluent Characterization Study and Report

Ocean Plan Appendix III requires annual monitoring of all Table B parameters for facilities with a permitted flow between 1 mgd and 10 mgd. This Order does not include effluent limitations for priority pollutants that do not demonstrate Reasonable Potential, but this provision requires the Dischargers to continue monitoring for these pollutants as described in the Regional Standard Provisions (Attachment G) and as specified in the MRP (Attachment E). If concentrations of these constituents increase significantly, the Dischargers are 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 water quality objectives. This requirement may be satisfied through identification of the constituent as a “pollutant of concern” in the Dischargers’ Pollutant Minimization Program, described in Provision VI.C.3 of the Order.

3. Best Management Practices and Pollutant Minimization Program

This provision is retained from the previous Order and is based on Ocean Plan section III.C.9.

4. Special Provisions for Municipal Facilities (POTWs Only)

a. **Biosolids Management Practices Requirements.** This provision is based on 40 CFR Parts 257 and 503 and Chapter 4 of the Basin Plan.

b. **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 Board-adopted General Collection System WDRs (General Order, Order No. 2006-0003-DWQ).

The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, Section VI.C.4.b. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

The State Water Board amended the General Order on February 20, 2008 in Order No. WQ 2008-0002-EXEC, to strengthen the notification and reporting requirements for sanitary sewer overflows. The Regional Water Board issued a 13267 letter on May 1, 2008, requiring dischargers to comply with the new notification requirements for sanitary sewer overflows, and to comply with similar notification and reporting requirements for spills from wastewater treatment facilities.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as an NPDES permit for the Facility discharges. As a step in the WDR adoption process, the Regional Water Board 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 notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided an opportunity to submit written comments and recommendations. Notification was provided through the San Mateo County Times.

B. Written Comments

Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Officer at the Regional Water Board at the address on the cover page of this Order, to the attention of Tong Yin.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on January 5, 2012.

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: February 8, 2012
Time: 9:00 am
Location: Elihu Harris State Office Building
1515 Clay Street, 1st Floor Auditorium
Oakland, CA 94612

Contact: Tong Yin, (510) 622-2418, email TYin@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 http://www.waterboards.ca.gov/sanfranciscobay where one can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water 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, 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 by calling 510-622-2300.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the North San Mateo County Sanitation District Wastewater Treatment Plant, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order may be directed to Tong Yin at 510-622-2418 (e-mail at TYin@waterboards.ca.gov).

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

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

For

NPDES WASTEWATER DISCHARGE PERMITS

March 2010

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

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

FOR

NPDES WASTEWATER DISCHARGE PERMITS

APPLICABILITY

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

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

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply – Not Supplemented

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

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

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

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

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

c. Provisions of emergency standby power.

d. Protection against vandalism.

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

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

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

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

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

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

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

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

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

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

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

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

E. Property Rights – Not Supplemented

F. Inspection and Entry – Not Supplemented

G. Bypass – Not Supplemented

H. Upset – Not Supplemented

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

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

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

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

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

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

1. **Storm Water Pollution Prevention Plan (SWPP Plan)**

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

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

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

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

2. Source Identification

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

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

b. A site map showing the following:

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

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

3) Paved areas and buildings;

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

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

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

7) Vehicle service areas.

c. A narrative description of the following:

1) Wastewater treatment process activity areas;

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

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

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

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

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

3. Storm Water Management Controls

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

a. Storm water pollution prevention personnel

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

b. Good housekeeping

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

c. Spill prevention and response

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

d. Source control

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

e. Storm water management practices

Storm water management practices are practices other than those that control the sources of pollutants. Such practices include treatment or conveyance structures, such as drop inlets, channels, retention and detention basins, treatment vaults, infiltration galleries,

filters, oil/water separators, etc. Based on assessment of the potential of various sources to contribute pollutants to storm water discharges in significant quantities, additional storm water management practices to remove pollutants from storm water discharges shall be implemented and design criteria shall be described.

f. Sediment and erosion control

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

g. Employee training

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

h. Inspections

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

i. Records

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

4. Annual Verification of SWPP Plan

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

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

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

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

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

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

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

II. STANDARD PROVISIONS – PERMIT ACTION – Not Supplemented

III. STANDARD PROVISIONS – MONITORING

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

1. Use of Certified Laboratories

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

2. Use of Appropriate Minimum Levels

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

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

3. Frequency of Monitoring

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

a. Timing of Sample Collection

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

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

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

4) Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay test the MRP requires. During the course of the test, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event a bioassay test does not comply with permit limits, the Discharger shall analyze these retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limits.

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

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

b. Conditions Triggering Accelerated Monitoring

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

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

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

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

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

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

c. Storm Water Monitoring

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

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

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

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

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

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

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

d. Receiving Water Monitoring

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

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

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

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

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

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

1. Biosolids Monitoring Frequency

Biosolids disposal must be monitored at the following frequency:

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

(Metric tons are on a dry weight basis)

2. Biosolids Pollutants to Monitor

Biosolids shall be monitored for the following constituents:

a. Land Application: arsenic, cadmium, copper, mercury, molybdenum, nickel, lead, selenium, and zinc

b. Municipal Landfill: Paint filter test (pursuant to 40 CFR 258)

c. Biosolids-only Landfill or Surface Disposal Site (if no liner and leachate system): arsenic, chromium, and nickel

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

1. Receiving Water Observations

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

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

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

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

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

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

f. Weather conditions:

   1) Air temperature; and

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

2. Wastewater Effluent Observations

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

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

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

3. Beach and Shoreline Observations

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

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

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

4. Land Retention or Disposal Area Observations

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

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

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

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

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

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

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

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

b. Weather conditions: wind direction and estimated velocity.

IV. STANDARD PROVISIONS – RECORDS

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

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

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

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

1. Analytical Information

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

2. Flow Monitoring Data

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

a. Total volume for each day; and

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

3. Wastewater Treatment Process Solids

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

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

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

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

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

2) Solids content of the dewatered biosolids; and

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

4. Disinfection Process

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

a. For bacteriological analyses:

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

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

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

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

2) Chlorine dosage (kg/day); and

3) Dechlorination chemical dosage (kg/day).

5. Treatment Process Bypasses

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

a. Identification of the treatment process bypassed;

b. Dates and times of bypass beginning and end;

c. Total bypass duration;

d. Estimated total bypass volume; and

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

6. Treatment Facility Overflows

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

C. Claims of Confidentiality – Not Supplemented

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information – Not Supplemented

B. Signatory and Certification Requirements – Not Supplemented

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

1. Self Monitoring Reports

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

a. Transmittal letter

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

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

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

3) Causes of violations;

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

5) Data invalidation (Data should not be submitted in an SMR if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate any measurement after it was submitted in an SMR, a letter shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. This request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation [e.g., laboratory sheet, log entry, test results, etc.], and discussion of the corrective actions taken or planned [with a time schedule for completion] to prevent recurrence of the sampling or measurement problem.);

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

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

b. Compliance evaluation summary

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

c. Results of analyses and observations

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

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

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

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

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

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

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

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

Table A

Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

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

d. Data reporting for results not yet available

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

e. Flow data

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

f. Annual self monitoring report requirements

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

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

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

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

4) List of approved analyses, including the following:

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

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

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

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

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

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

g. Report submittal

The Discharger shall submit SMRs to:

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

h. Reporting data in electronic format

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

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

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

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

D. Compliance Schedules – Not supplemented

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

1. Spill of Oil or Other Hazardous Material Reports

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

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

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

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

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

3) Nature of material spilled;

4) Quantity of material involved;

5) Receiving water body affected, if any;

6) Cause of spill;

7) Estimated size of affected area;

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

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

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

11) Persons or agencies notified.

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

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

a. Two (2)-Hour Notification

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

1) Incident description and cause;

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

3) Date and time the unauthorized discharge started;

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

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

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

6) Identity of the person reporting the unauthorized discharge.

b. 24-hour Certification

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

c. 5-Day Written Report

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

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

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

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

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

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

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

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

c. Communication Protocol

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

Table B

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

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

F. Planned Changes – Not supplemented

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

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

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

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

G. Anticipated Noncompliance – Not supplemented

H. Other Noncompliance – Not supplemented

I. Other Information – Not supplemented

VIII. STANDARD PROVISIONS – ENFORCEMENT – Not Supplemented

IX. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – Not Supplemented

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

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

1. Arithmetic Calculations

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

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

or

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. Untreated waste is raw wastewater.

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

Table C
List of Monitoring Parameters and Analytical Methods

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

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

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

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

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

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

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

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

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

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

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