

If applicable, the report shall also evaluate the effectiveness of the local source control or pretreatment program using the State Water Resources Control Board's "Guidelines for Determining the Effectiveness of Local Pretreatment Programs."

D. Central Coast Standard Provisions – General Pretreatment Provisions

1. Discharge of pollutants by "indirect dischargers" in specific industrial sub-categories (appendix C, 40 CFR Part 403), where categorical pretreatment standards have been established, or are to be established, (according to 40 CFR Chapter 1, Subchapter N), shall comply with the appropriate pretreatment standards:
 - a. By the date specified therein;
 - b. Within three (3) years of the effective date specified therein, but in no case later than July 1, 1984; or,
 - c. If a new indirect discharger, upon commencement of discharge.

E. Central Coast Standard Provisions – Enforcement

1. Any person failing to file a report of waste discharge or other report as required by this permit shall be subject to a civil penalty not to exceed \$5,000 per day.
2. Upon reduction, loss, or failure of the treatment facility, the "Discharger" shall, to the extent necessary to maintain compliance with this permit, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided.

F. Central Coast Standard Provisions – Definitions (Not otherwise included in Attachment A to this Order)

1. A "composite sample" is a combination of no fewer than eight (8) individual samples obtained at equal time intervals (usually hourly) over the specified sampling (composite) period. The volume of each individual sample is proportional to the flow rate at the time of sampling. The period shall be specified in the Monitoring and Reporting Program ordered by the Executive Officer.
2. "Daily Maximum" limit means the maximum acceptable concentration or mass emission rate of a pollutant measured during a calendar day or during any 24-hour period reasonably representative of the calendar day for purposes of sampling. It is normally compared with results based on "composite samples" except for ammonia, total chlorine, phenolic compounds, and toxicity concentration. For all exceptions, comparisons will be made with results from a "grab sample".
3. "Discharger", as used herein, means, as appropriate: (1) the Discharger, (2) the local sewerage entity (when the collection system is not owned and operated by the Discharger), or (3) "indirect discharger" (where "Discharger" appears in the same paragraph as "indirect discharger", it refers to the discharger.)
4. "Duly Authorized Representative" is one where:
 - a. the authorization is made in writing by a person described in the signatory paragraph of Federal Standard Provision 1.E.2;
 - b. the authorization specifies either an individual or the occupant of a position having either responsibility for the overall operation of the regulated facility, such as the plant manager, or overall responsibility for environmental matters of the company; and,
 - c. the written authorization was submitted to the Central Coast Water Board.

5. A "grab sample" is defined as any individual sample collected in less than 15 minutes. "Grab samples" shall be collected during peak loading conditions, which may or may not be during hydraulic peaks. It is used primarily in determining compliance with the daily maximum limits identified in Central Coast Standard Provision – Provision II.F.2 and instantaneous maximum limits.
6. "Hazardous substance" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.
7. "Incompatible wastes" are:
 - a. Wastes which create a fire or explosion hazard in the treatment works;
 - b. Wastes which will cause corrosive structural damage to treatment works, but in no case wastes with a pH lower than 5.0 unless the works is specifically designed to accommodate such wastes;
 - c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation of treatment works;
 - d. Any waste, including oxygen demanding pollutants (BOD, etc), released in such volume or strength as to cause inhibition or disruption in the treatment works and subsequent treatment process upset and loss of treatment efficiency; and,
 - e. Heat in amounts that inhibit or disrupt biological activity in the treatment works or that raise influent temperatures above 40°C (104°F) unless the treatment works is designed to accommodate such heat.
8. "Indirect Discharger" means a non-domestic discharger introducing pollutants into a publicly owned treatment and disposal system.
9. "Log Mean" is the geometric mean. Used for determining compliance of fecal or total coliform populations, it is calculated with the following equation:

$$\text{Log Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n}$$

in which "n" is the number of days samples were analyzed during the period and any "C" is the concentration of bacteria (MPN/100 ml) found on each day of sampling. "n" should be five or more.

10. "Mass emission rate" is a daily rate defined by the following equations:

$$\text{mass emission rate (lbs/day)} = 8.34 \times Q \times C; \text{ and,}$$

$$\text{mass emission rate (kg/day)} = 3.79 \times Q \times C,$$

where "C" (in mg/l) is the measured daily constituent concentration or the average of measured daily constituent concentrations and "Q" (in MGD) is the measured daily flow rate or the average of measured daily flow rates over the period of interest.

11. The "Maximum Allowable Mass Emission Rate," whether for a month, week, day, or six-month period, is a daily rate determined with the formulas in paragraph F.10, above, using the effluent concentration limit specified in the permit for the period and the average of measured daily flows (up to the allowable flow) over the period.
12. "Maximum Allowable Six-Month Median Mass Emission Rate" is a daily rate determined with the formulas in Central Coast Standard Provision – Provision J.L.F.10, above, using the "six-month Median" effluent limit specified in the permit, and the average of measured daily flows (up to the allowable flow) over a 180-day period.
13. "Median" is the value below which half the samples (ranked progressively by increasing value) fall. It may be considered the middle value, or the average of two middle values.
14. "Monthly Average" (or "Weekly Average", as the case may be) is the arithmetic mean of daily concentrations or of daily mass emission rates over the specified 30-day (or 7-day) period

$$\text{Average} = (X_1 + X_2 + \dots + X_n) / n$$

in which "n" is the number of days samples were analyzed during the period and "X" is either the constituent concentration (mg/l) or mass emission rate (kg/day or lbs/day) for each sampled day. "n" should be four or greater.

15. "Municipality" means a city, town, borough, county, district, association, or other public body created by or under state law and having jurisdiction over disposal of sewage, industrial waste, or other waste.
16. "Overflow" means the intentional or unintentional diversion of flow from the collection and transport systems, including pumping facilities.
17. "Pollutant-free wastewater" means inflow and infiltration, storm waters, and cooling waters and condensates which are essentially free of pollutants.
18. "Primary Industry Category" means any industry category listed in 40 CFR Part 122, Appendix A.
19. "Removal Efficiency" is the ratio of pollutants removed by the treatment unit to pollutants entering the treatment unit. Removal efficiencies of a treatment plant shall be determined using "Monthly averages" of pollutant concentrations (C, in mg/l) of influent and effluent samples collected about the same time and the following equation (or its equivalent):

$$C_{\text{Effluent}} \text{ Removal Efficiency (\%)} = 100 \times (1 - C_{\text{effluent}} / C_{\text{influent}})$$

20. "Severe property damage" means substantial physical damage to property, damage to treatment facilities which causes them to become inoperable, or substantial and permanent loss to natural resources which can reasonably be expected to occur in

the absence of a "bypass". It does not mean economic loss caused by delays in production.

21. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.
22. To "significantly contribute" to a permit violation means an "indirect discharger" must:
 - a. Discharge a daily pollutant loading in excess of that allowed by contract with the "Discharger" or by Federal, State, or Local law;
 - b. Discharge wastewater which substantially differs in nature or constituents from its average discharge;
 - c. Discharge pollutants, either alone or in conjunction with discharges from other sources, which results in a permit violation or prevents sewage sludge use or disposal; or
 - d. Discharge pollutants, either alone or in conjunction with pollutants from other sources, that increase the magnitude or duration of permit violations.
23. "Toxic Pollutant" means any pollutant listed as toxic under Section 307 (a) (1) of the Clean Water Act or under 40 CFR Part 122, Appendix D. Violation of maximum daily discharge limitations are subject to 24-hour reporting (Federal Standard Provisions I.E.5.).
24. "Zone of Initial Dilution" means the region surrounding or adjacent to the end of an outfall pipe or diffuser ports whose boundaries are defined through calculation of a plume model verified by the State Water Resources Control Board.

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR §122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Central Coast Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and California regulations.

The monitoring program for a discharger receiving a Clean Water Act Section 301(h) Modified National Pollutant Discharge Elimination System (NPDES) permit is intended to: a) document short and long-term effects of the discharge on receiving waters, sediments, biota, and on beneficial uses of the receiving water; b) determine compliance with NPDES permit requirements and conditions; and c) assess the effectiveness of industrial pretreatment and toxics control programs.

I. GENERAL MONITORING PROVISIONS

The Central Coast Water Board and U.S. Environmental Protection Agency, Region IX (USEPA) may revise the monitoring program presented herein, within the specified order and permit period. The program will be reviewed at annual intervals to assess its effectiveness at meeting the objectives stated above. If predictable relationships among effluent, water quality and biological monitoring variables can be clearly demonstrated, it may be appropriate to decrease certain elements of the monitoring program. Conversely, the monitoring program may be intensified if it appears that the above objectives cannot be achieved through the existing monitoring program.

- A.** Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with CWC section 13176, and must include quality assurance/quality control data with their reports.
- B.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and approval of the Central Coast Water Board.
- C.** Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration, and operation of acceptable flow measurement devices can be obtained from the following references.

1. A Guide to Methods and Standards for the Measurement of Water Flow, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)
 2. Water Measurement Manual, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)
 3. Flow Measurement in Open Channels and Closed Conduits, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)
 4. NPDES Compliance Sampling Manual, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)
- D. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.
- F. Unless otherwise specified by this MRP, all monitoring shall be conducted according to test procedures established at 40 CFR 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. All analyses shall be conducted using the lowest practical quantitation limit achievable using the specified methodology. Where effluent limitations are set below the lowest achievable quantitation limits, pollutants not detected at the lowest practical quantitation limits will be considered in compliance with effluent limitations. Analysis for toxics listed by the California Toxics Rule shall also adhere to guidance and requirements contained in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005). Analyses for toxics listed in Table B of the California Ocean Plan (2005) shall adhere to guidance and requirements contained in that document. The Minimum Levels identified in the 2005 Ocean Plan represent the lowest concentration of a pollutant that can be quantitatively measured in a sample given the current state of performance in analytical chemistry methods in California.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, receiving water limitations, and other requirements in this Order. Monitoring stations have been located to assess the short-term environmental impacts of the discharge on the receiving water, benthic sediment, and biota in the vicinity of the outfall.

Monitoring Location Name	Description	Latitude	Longitude	Distance from Reference
M-INF	Treatment Plant Headworks	--	--	--
M-001	Effluent, downstream of any inplant return flows or disinfection units (Discharge Point 001)	35° 22' 47" N	120° 51' 40" W	--
Surf Zone Monitoring Locations				Along-Shore Distance and Direction from Location SZ-C
SZ-A1	Upcoast Reference	35° 23' 58" N	120° 52' 07" W	1330 m (4363 ft) N
SZ-A	Upcoast Midfield	35° 23' 45" N	120° 52' 04" W	912 m (2992 ft) N
SZ-B	Upcoast Nearfield	35° 23' 31" N	120° 52' 00" W	488 m (1602 ft) N
SZ-C	Onshore of Diffuser	35° 23' 15" N	120° 51' 57" W	0
SZ-D	Downcoast Nearfield	35° 23' 02" N	120° 51' 55" W	426 m (1398 ft) S
SZ-E	Downcoast Midfield	35° 22' 46" N	120° 51' 54" W	922 m (3026 ft) S
SZ-F	Downcoast Reference	35° 22' 24" N	120° 51' 53" W	1602 m (5250 ft) S
SZ-G	Morro Creek immediately before flowing to the ocean	--	--	--
Receiving Water (Ocean) Monitoring Locations				Distance from Diffuser Center (m)
RW-1	Upcoast Midfield	35° 23.253' N	120° 52.504' W	100
RW-2	Upcoast Nearfield	35° 23.231' N	120° 52.504' W	60
RW-3	Upcoast ZID	35° 23.210' N	120° 52.504' W	20

Monitoring Location Name	Description	Latitude	Longitude	Distance from Reference
RW-4	Downcoast ZID	35° 23.188' N	120° 52.504' W	20
RW-5	Downcoast Nearfield	35° 23.167' N	120° 52.504' W	60
RW-6	Downcoast Midfield	35° 23.145' N	120° 52.504' W	100
Benthic Monitoring Locations				Distance from Diffuser Center (m)
B-2	Upcoast Reference	35° 23.280' N	120° 52.504' W	150
B-3	Upcoast Nearfield	35° 23.231' N	120° 52.504' W	60
B-4	Upcoast ZID	35° 23.210' N	120° 52.504' W	20
B-5	Downcoast ZID	35° 23.188' N	120° 52.504' W	20
B-6	Downcoast Nearfield	35° 23.167' N	120° 52.504' W	60
B-7	Downcoast Reference	35° 23.118' N	120° 52.504' W	150

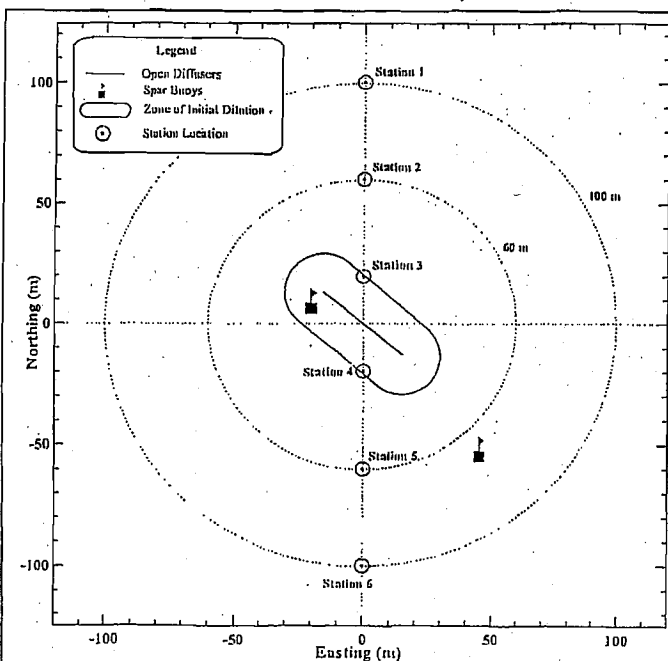


Figure 1: Vertical Receiving Water (Ocean) Monitoring Locations

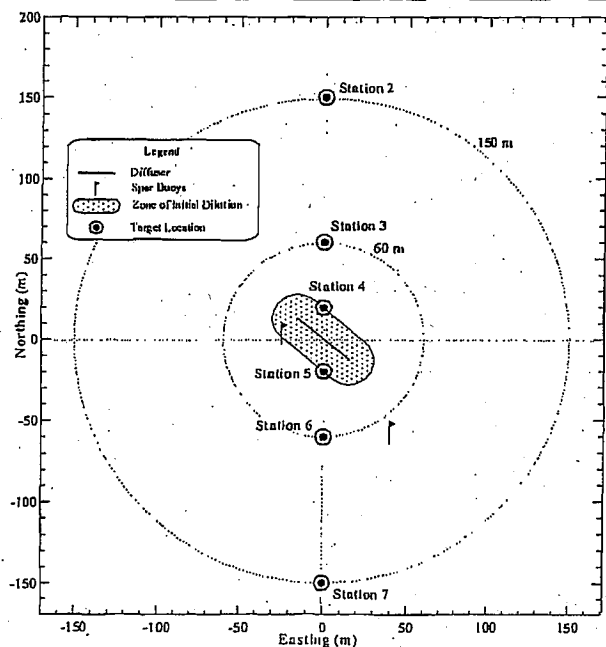


Figure 2: Benthic Monitoring Stations

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-INF

1. The Discharger shall monitor representative samples¹ of influent to the treatment plant at M-INF as follows:

Parameter	Units	Sample Type	Minimum Frequency of Sampling/Analysis
Daily Flow	MG	Metered	Daily
Maximum Daily Flow	MGD	Metered	Daily
Mean Daily Flow	MGD	Calculated	Monthly
BOD ₅ (20°C)	mg/L	24-hr Composite	Weekly
Suspended Solids	mg/L	24-hr Composite	Weekly

2. Effluent flow metering shall be reported in place of influent flow metering when the flume is surcharged.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

The Discharger shall monitor representative effluent samples (downstream of any in-plant return flows or disinfection units) at M-001, as follows:

Parameter	Units	Sample Type	Minimum Frequency of Sampling/Analysis
Total Chlorine Residual	mg/L	Grab	Daily
Chlorine Usage	lbs/day	Recorded	Daily
Total Coliform	MPN	Grab	5 days/week ²
Temperature	°C	Grab	5 days/week ¹
Turbidity	NTU	Grab	5 days/week ¹
BOD ₅ (20°C)	mg/L	24-hr Composite	Weekly ¹
Suspended Solids	mg/L	24-hr Composite	Weekly ¹
pH	pH units	Grab	Weekly ¹
Settleable Solids	mL/L	Grab	Weekly
Grease and Oil	mg/L	Grab	Weekly
Chronic toxicity ³	TUc	24-hr Composite	Semiannually (Jan/July)

¹ Influent samples shall be corrected to compensate for in-plant return flows.

² Sampling shall be arranged so that each day of the 7-day week is represented, at least once, each month, or every two months for weekly sampling. For samples collected five times per month, at least one sample shall be taken weekly, and sampling should be arranged so that each day of the 7-day week is represented, at least once, every two months.

Parameter	Units	Sample Type	Minimum Frequency of Sampling/Analysis
Ammonia (as N)	mg/L	Grab	Monthly
Nitrate (as N)	mg/L	Grab	Semiannually (Jan/July)
Urea (as N)	mg/L	Grab	Semiannually (Jan/July)
Ortho-Phosphate (as P)	mg/L	Grab	Semiannually (Jan/July)
Dissolved Silica (SiO ₂)	mg/L	Grab	Semiannually (Jan/July)

PROTECTION OF MARINE AQUATIC LIFE

Parameter	Units	Type of Sample	Minimum Frequency of Sampling/Analysis	Minimum Levels ³ (µg/L)
Arsenic	mg/L	24-hr. Composite	Semi-annually	All methods contained in Table II-3 of 2005 Ocean Plan, with exception to the Direct Current Plasma method
Cadmium	mg/L	" "	" "	" "
Chromium(Hex) ⁴	mg/L	" "	" "	" "
Copper	mg/L	" "	" "	" "
Lead	mg/L	" "	" "	" "
Mercury	µg/L	" "	" "	" "
Nickel	mg/L	" "	" "	" "
Selenium	mg/L	" "	" "	" "
Silver	mg/L	" "	" "	" "
Zinc	mg/L	" "	" "	" "
Cyanide	mg/L	" "	" "	" "
Phenolic Compounds	mg/L	Grab	Annually	See Table II-2 of 2005 Ocean Plan

³ See MRP Section V, *Whole Effluent Toxicity Testing Requirements*, below.

³ Minimum Levels (taken from Appendix II of the 2001 California Ocean Plan) represent the lowest quantifiable concentration in a sample based on the proper application of method-specific analytical procedures and the absence of matrix interferences.

The Discharger must instruct their laboratory to establish calibration standards so that the Minimum Level is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point in the calibration curve.

The Discharger must report with each sample result the reported Minimum Level and the laboratory's current Method Detection Limit (MDL).

Discharger must report analytical results using the following protocols:

1. Sample results greater than or equal to the reported Minimum⁴ Level must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample).
2. Sample results less than the reported Minimum Level, but greater than or equal to the laboratory's MDL, must be reported as "Detected, but Not Quantified", or DNQ. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc.").
3. Sample results less than the laboratory's MDL must be reported as "Not Detected", or ND.

⁴ Discharger may at their option meet this limitation as total chromium limitation.

(non-chlorinated)				
Chlorinated Phenolics	mg/L	" "	" "	" "
Endosulfan ⁵	µg/L	24-hr. Composite	" "	0.01
Endrin	µg/L	" "	" "	0.01
HCH ⁶	µg/L	" "	" "	See Table II-4 of 2005 Ocean Plan
Radionuclide	pCi/L	" "	" "	--

⁵ Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.

⁶ HCH shall mean the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

PROTECTION OF HUMAN HEALTH – NONCARCINOGENS⁷

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatography / Mass Spectrometry Method
Acrolein	mg/L	24-hr. Composite	Annually	2	5
Antimony	g/L	"	" "	All methods contained in Table II-3 of 2005 Ocean Plan	
Bis(2-chloroethoxy) Methane	mg/L	"	" "	--	5
Bis(2-chloroisopropyl) Ether	g/L	"	" "	10	2
Chlorobenzene	mg/L	"	" "	0.5	2
Chromium (III)	g/L	"	" "	See Table II-3 of 2005 Ocean Plan	
Di-n-butyl Phthalate	g/L	"	" "	--	10
Dichlorobenzenes ⁸	g/L	"	" "	See Table II-2 of 2005 Ocean Plan	
Diethyl Phthalate	g/L	"	" "	10	2
Dimethyl Phthalate	g/L	"	" "	10	2
4,6-dinitro-2-methylphenol	mg/L	"	" "	10	5
2,4-dinitrophenol	mg/L	"	" "	5	5
Ethylbenzene	g/L	"	" "	0.5	2
Fluoranthene	mg/L	"	" "	10	1
Hexachlorocyclopentadiene	mg/L	"	" "	5	5
Isophorone	g/L	"	" "	10	1
Nitrobenzene	mg/L	"	" "	10	1

⁷ After results are reported, the Discharger may request to the Regional Board and USEPA that only those parameters detected during the first year of sampling be analyzed during the remainder of the permit.

⁸ Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatography / Mass Spectrometry Method
Thallium	mg/L	"	" "	See Table II-3 of 2005 Ocean Plan	
Toluene	g/L	"	" "	0.5	2
Tributyltin	µg/L	"	" "	--	--
1,1,1-trichloroethane	g/L	"	" "	0.5	2
1,1,2-trichloroethane	mg/L	"	" "	0.5	2

PROTECTION OF HUMAN HEALTH – CARCINOGENS⁸

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatography / Mass Spectrometry Method
Acrylonitrile	µg/L	24-hr. Composite	Annually	2	2
Aldrin	ng/L	"	" "	0.005	--
Benzene	mg/L	"	" "	0.5	2
Benzidine	ng/L	"	" "	--	5
Beryllium	µg/L	"	" "	All methods contained in Table II-3 of 2005 Ocean Plan, with exception to the Direct Current Plasma and Flame Atomic Absorption methods	
Bis(2-chloroethyl) Ether	µg/L	"	" "	--	1
Bis(2-ethylhexyl) Phthalate	mg/L	"	" "	10	5

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatography / Mass Spectrometry Method
Carbon tetrachloride	mg/L	"	"	0.5	2
Chlordane ⁹	ng/L	"	"	0.1	--
Chlorodibromomethane	µg/L	"	"	0.5	2
Chloroform	mg/L	"	"	0.5	2
DDT ¹⁰	ng/L	"	"	See Table II-4 of 2005 Ocean Plan	
1,4-dichlorobenzene	mg/L	"	"	See Table II-1 and II-2 of 2005 Ocean Plan	
3,3-dichlorobenzidine	µg/L	"	"	--	5
1,2-dichloroethane	mg/L	"	"	0.5	2
1,1-dichloroethene	mg/L	"	"	0.5	2
Dichlorobromomethane	µg/L	"	"	0.5	2
Dichloromethane	mg/L	"	"	0.5	2
1,3-dichloropropene	mg/L	"	"	See Table II-1 and II-2 of 2005 Ocean Plan	
dieldrin	ng/L	"	"	0.01	--
2,4-dinitrotoluene	mg/L	"	"	10	5
1,2-diphenylhydrazine	µg/L	"	"	--	1
Halomethanes ¹¹	mg/L	"	"		
Heptachlor	µg/L	"	"	0.01	--

⁹ Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, chlordene-alpha, chlordene-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

¹⁰ DDT shall mean the sum of 4,4-DDT, 2,4-DDT, 2,4-DDE, 4,4-DDD, and 2,4-DDD.

¹¹ Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatography / Mass Spectrometry Method
Heptachlor epoxide	µg/L	"	" "	0.01	--
Hexachlorobenzene	ng/L	"	" "	--	1
Hexachlorobutadiene	mg/L	"	" "	5	1
Hexachloroethane	mg/L	"	" "	5	1
N-nitrosodimethylamine	mg/L	"	" "	10	5
N-nitrosodi-N-propylamine	mg/L	"	" "	10	5
N-nitrosodiphenylamine	mg/L	"	" "	10	1
PAHs ¹²	µg/L	"	" "	See Appendix II of 2005 Ocean Plan	
PCBs ¹³	ng/L	"	" "	See Table II-4 of 2005 Ocean Plan	
TCDD equivalents ¹⁴	pg/L	"	" "	--	--
1,1,2,2-tetrachloroethane	g/L	"	" "	0.5	2
Tetrachloroethylene	mg/L	"	" "	0.5	2
Toxaphene	ng/L	"	" "	0.5	--

¹² 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.

¹³ 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.

¹⁴ 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 below:

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

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatography / Mass Spectrometry Method
Trichloroethylene	mg/L	"	" "	0.5	2
2,4,6-trichlorophenol	µg/L	"	" "	10	10
Vinyl Chloride	mg/L	"	" "	0.5	2

B. Mass Emission Goals

The Discharger shall report the mass emission rates for all constituents that have mass emission effluent goals listed below, and the flow used to calculate the mass emission rates for each constituent. Annual mass emissions will be compared to performance based mass emission goals. For compounds with detectable concentrations, exceedances of performance-based mass emission goals shall be considered indicative of a statistically significant increase in loading and will trigger an antidegradation analysis in the following permit cycle.

OBJECTIVES FOR THE PROTECTION OF MARINE LIFE

Constituent	Value	Units
Arsenic ¹⁵	17	kg/yr
Cadmium	88	kg/yr
Chromium	93	kg/yr
Copper ¹⁶	690	kg/yr
Lead	465	kg/yr
Mercury	1.4	kg/yr
Nickel	142	kg/yr
Selenium	65	kg/yr
Silver	28	kg/yr
Zinc ¹⁶	244	kg/yr
Cyanide, Total ¹⁶	71	kg/yr
Endosulfan	3	kg/yr
Endrin	1	kg/yr
HCH	228	kg/yr

¹⁵ The performance-based mass emission goal was determined from the 99th percentile of historically detected effluent concentrations, and a flow of 2.06 MGD.

OBJECTIVES FOR THE PROTECTION OF HUMAN HEALTH –
NONCARCINOGENS

Constituent	Value	Units
Acrolein	--	--
Antimony	285	kg/yr
Bis(2-chloroethoxy) methane	142	kg/yr
Bis(2-chloroisopropyl)ether	--	--
chlorobenzene	--	--
Chromium III	--	--
Di-n-butyl phthalate	142	kg/yr
Dichlorobenzene	5.7	kg/yr
1,1-Dichloroethene	3	kg/yr
Diethyl phthalate	191	kg/yr
Dimethyl phthalate	142	kg/yr
2-Methyl-4,6-dinitrophenol	142	kg/yr
2,4-Dinitrophenol	342	kg/yr
Ethylbenzene	3	kg/yr
Fluoranthene	142	kg/yr
hexachlorocyclopentadiene	--	--
Isophorone	142	kg/yr
Nitrobenzene	142	kg/yr
Thallium	285	kg/yr
Toluene ¹⁶	4	kg/yr
1,1,2,2-Tetrachloroethane	3	kg/yr
1,1,1-Trichloroethane (TCA)	3	kg/yr
1,1,2-Trichloroethane	3	kg/yr

OBJECTIVES FOR THE PROTECTION OF HUMAN HEALTH – CARCINOGENS

Constituent	Value	Units
Acrylonitrile	--	--
Aldrin	0.01	kg/yr
Benzene ¹⁶	12	kg/yr
Benzidine	0.03	kg/yr
Beryllium	28	kg/yr
Bis (2-chloroethyl) Ether	17	kg/yr
Bis(2-ethylhexyl) Phthalate	320	kg/yr
Carbon Tetrachloride	3	kg/yr
Chlordane	8.8	g/yr
Chloroform ¹⁶	5	kg/yr
DDT	60	g/yr
1,4-Dichlorobenzene	57	kg/yr
3,3-Dichlorobenzidine	3.1	kg/yr
1,2-Dichloroethane	3	kg/yr

Constituent	Value	Units
dichloromethane	--	--
1,3-dichloropropene	--	--
Dieldrin	0.02	kg/yr
2,4-Dinitrotoluene	142	kg/yr
1,2-Diphenylhydrazine	60	kg/yr
Halomethanes ¹⁶	25	kg/yr
Heptachlor	0.27	kg/yr
Hexachlorobenzene	0.08	kg/yr
Hexachlorobutadiene	142	kg/yr
Hexachloroethane	142	kg/yr
N-Nitrosodimethylamine	342	kg/yr
N-Nitrosodiphenylamine	142	kg/yr
PAHs	3.4	kg/yr
PCBs	7.3	g/yr
Dibenzofuran	57	kg/yr
Dioxin (Total TCDD equivalents)	1.48	mg/yr
Tetrachloroethene ¹⁶	4	kg/yr
Toxaphene	0.08	kg/yr
Trichloroethene (TCE)	3	kg/yr
2,4,6-Trichlorophenol	114	kg/yr
Vinyl Chloride	3	kg/yr

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Testing

The presence of chronic toxicity shall be estimated as specified in Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, EPA-821/600/R-95/136; Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, EPA-600-4-91-003; Procedures Manual for Conducting Toxicity Tests developed by the Marine Bioassay Project, SWRCB 1996, 96-1WQ; and/or Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, EPA/600/4-87-028 or subsequent editions.

Chronic toxicity measures a sublethal effect (e.g., reduced growth or reproduction) to experimental test organisms exposed to an effluent compared to that of the control organisms.

Chronic Toxicity (TU_c) = 100/NOEL.

The no observed effect level (NOEL) is the maximum tested concentration in a medium which does not cause known adverse effects upon chronic exposure in the

species in question (i.e., the highest effluent concentration to which organisms are exposed in a chronic test that causes no observable adverse effects on the test organisms; e.g., the highest concentration of a toxicant to which the values for the observed responses are not statistically significantly different from the controls). Examples of chronic toxicity include but are not limited to measurements of toxicant effects on reproduction, growth, and sublethal effects that can include behavioral, physiological, and biochemical effects.

In accordance with the 2005 Ocean Plan, Appendix III, *Standard Monitoring Procedures*, the Discharger shall use the critical life stage toxicity tests specified in the table below to measure TUc. Other species or protocols will be added to the list after State Water Board review and approval.

A minimum of two test species with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period of no fewer than two tests, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Table E-4. Approved Tests—Chronic Toxicity

Species	Test	Tier ^[1]	Reference ^[2]
Giant kelp, <i>Macrocystis pyrifera</i>	percent germination; germ tube length	1	a, c
Red abalone, <i>Haliotis rufescens</i>	abnormal shell development	1	a, c
Oyster, <i>Crassostrea gigas</i> ; mussels, <i>Mytilus spp.</i>	abnormal shell development; percent survival	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent normal development	1	a, c
Urchin, <i>Strongylocentrotus purpuratus</i> ; sand dollar, <i>Dendraster excentricus</i>	percent fertilization	1	a, c
Shrimp, <i>Homesimysis costata</i>	percent survival; growth	1	a, c
Shrimp, <i>Mysidopsis bahia</i>	percent survival; fecundity	2	b, d
Topsmelt, <i>Atherinops affinis</i>	larval growth rate; percent survival	1	a, c
Silverside, <i>Menidia beryllina</i>	larval growth rate; percent survival	2	b, d

1 - First tier methods are preferred for compliance monitoring. If first tier organisms are not available, the Discharger can use a second tier test method following approval by the Regional Water Board:

2 - Protocol References:

a. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term Methods for Estimating the Chronic

Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. USEPA Report No. EPA/600/R-95/136.

- b. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. USEPA Report No. EPA-600-4-91-003.
- c. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.
- d. Weber, C.I., W.B. Horing, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds): 1998. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

Dilution and control waters shall be obtained from an area of the receiving waters, typically upstream, which is unaffected by the discharge. Standard dilution water can be used, if the receiving water itself exhibits toxicity or if approved by the Central Coast Water Board. If the dilution water used in testing is different from the water in which the test organisms were cultured, a second control sample using culture water shall be tested.

A minimum of two test species with approved test protocols with approved test protocols shall be used to measure compliance with the toxicity objective. If possible, the test species shall include a vertebrate, an invertebrate, and an aquatic plant. The sensitivity of test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results. After a screening period of no less than three tests, monitoring may be reduced to the most sensitive species.

The Discharger shall include a full report of toxicity test results with the regular monthly monitoring report and include the following information.

- a. toxicity test results,
- b. dates of sample collection and initiation of each toxicity test, and
- c. acute and/or chronic toxicity discharge limitations (or value).

Toxicity test results shall be reported according to the appropriate guidance - Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, USEPA Office of Water, EPA-821-R-02-012 (2002) or the latest edition, or Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012 (2002) or subsequent editions.

If the initial investigation TRE workplan is used to determine that additional (accelerated) toxicity testing is unnecessary, these results shall be submitted with the monitoring report for the month in which investigations conducted under the TRE workplan occurred.

Within 14 days of receipt of test results exceeding a chronic toxicity discharge limitation, the Discharger shall provide written notification to the Executive Officer of:

- a. Findings of the TRE or other investigation to identify the cause(s) of toxicity,
- b. Actions the Discharger has taken/will take, to mitigate the impact of the discharge and to prevent the recurrence of toxicity.

When corrective actions, including a TRE, have not been completed, a schedule under which corrective actions will be implemented, or the reason for not taking corrective action, if no action has been taken.

B. Toxicity Identification / Reduction Evaluations

If the discharge consistently exceeds an effluent limitation for toxicity specified by Section IV of this Order, the Discharger shall conduct a Toxicity Reduction Evaluation (TRE) in accordance with the Discharger's TRE Workplan.

A 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. The TRE shall include all reasonable steps to identify the source of toxicity. The Discharger shall take all reasonable steps to reduce toxicity to the required level once the source of toxicity is identified.

The Discharger shall maintain a TRE Workplan, which describes steps that the Discharger intends to follow in the event that a toxicity effluent limitation established by this Order is exceeded in the discharge. The workplan shall be prepared in accordance with current technical guidance and reference material, including EPA/600/2-88-070 (for industrial discharges) or EPA/600/2-88/062 (for municipal discharges), and shall include, at a minimum:

1. Actions that will be taken to investigate/identify the causes/sources of toxicity,
2. Actions that will be evaluated to mitigate the impact of the discharge, to correct the non-compliance, and/or to prevent the recurrence of acute or chronic toxicity (this list of action steps may be expanded, if a TRE is undertaken), and
3. A schedule under which these actions will be implemented.

When monitoring measures toxicity in the effluent above the limitation established by this Order, the Discharger shall resample immediately, if the discharge is continuing, and retest for whole effluent toxicity. Results of an initial failed test and results of subsequent monitoring shall be reported to the Executive Officer (EO) as soon as possible following receipt of monitoring results. The EO will determine whether to

initiate enforcement action, whether to require the Discharger to implement a TRE, or to implement other measures. The Discharger shall conduct a TRE giving due consideration to guidance provided by the USEPA's *Toxicity Reduction Evaluation Procedures, Phases 1, 2, and 3* (EPA document nos. EPA 600/3-88/034, 600/3-88/035, and 600/3-88/036, respectively). A TRE, if necessary, shall be conducted in accordance with the following schedule.

Table 11. Toxicity Reduction Evaluation—Schedule

Action Step	When Required
Take all reasonable measures necessary to immediately reduce toxicity, where the source is known.	Within 24 hours of identification of noncompliance.
Initiate the TRE in accordance to the Workplan.	Within 7 days of notification by the EO
Conduct the TRE following the procedures in the Workplan.	Within the period specified in the Workplan (not to exceed one year, without an approved Workplan)
Submit the results of the TRE, including summary of findings, required corrective action, and all results and data.	Within 60 days of completion of the TRE
Implement corrective actions to meet Permit limits and conditions.	To be determined by the EO

VI. RECLAMATION MONITORING REQUIREMENTS

If reclaimed water is used, the the Discharger shall comply with applicable State and local monitoring requirements regarding the production and use of reclaimed wastewater, including requirements established by the DHS at title 22, sections 60301 - 60357 of the CCR, Water Recycling Criteria.

VII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surf-Zone Monitoring

Surf-zone monitoring locations are described in Section II, *Monitoring Locations*, above. Surf zone monitoring is conducted to assess bacteriological conditions in areas used for body-contact sports (e.g. surfing) and where shellfish may be harvested for human consumption and to assess aesthetic conditions for general recreational uses (e.g., picnicking, boating, etc.). Grab samples shall be taken at all surf-zone monitoring stations whenever effluent Total Coliform bacteria in effluent exceeds 2400 MPN/100 mL. Such monitoring shall continue daily for four consecutive days or until effluent returns to compliance with the 30-day median of 23 MPN/100 mL, whichever is longer. The Executive Officer or USEPA may require daily surf-zone monitoring to continue beyond four days if deemed necessary to determine compliance with receiving water limitations. Sampling shall be conducted during daylight hours, one to three hours prior

to peak high tide (i.e., incoming tide). The sample shall be collected as far seaward within the surf zone as possible. Samples shall be analyzed for Total and Fecal Coliform^{16,17}, and Enterococcus¹⁸, and reported in units of MPN/100 mL.

Monitoring shall also include observations of wind (direction and speed), weather (e.g., cloudy, sunny, rainy), waves, longshore currents (e.g., direction), and tidal conditions (e.g., rising tide, slack). Observations of water discoloration, floating oil and grease, turbidity, odor and materials of sewage origin in the water or on the beach shall be recorded. The water temperature (Celsius) shall also be recorded.

B. Receiving Water (Ocean) Monitoring

Ocean monitoring locations are described in Section II, *Monitoring Locations*, above. Data may be obtained using multiple electronic probes (as appropriate) to measure parameters (i.e., dissolved oxygen, pH, salinity, temperature, and natural light) through the entire water column, or by measurement of discrete samples collected at 0.3 meters below the surface, 3 meter intervals within the water column, and 2 meters above the seabed.

In addition to the vertical profiling conducted at the six fixed stations, a receiving-water survey shall be conducted by continuously towing an electronic instrumentation package at two depths around and across the zone of initial dilution. One survey shall be conducted in the upper water column, near the base of the shallow thermocline. Another survey shall be conducted immediately above the benthic boundary layer, approximately 5 meters above the bottom. The towed instrumentation package shall pass over the zone of initial dilution at least five times during the survey. Vessel speed and sampling rates shall be sufficient to collect at least one sample for every meter traversed.

Water sampling shall be collected between the hours of 6 AM and 6 PM at all receiving water monitoring stations and analyzed as follows:

Constituent	Units	Sample Type	Minimum Frequency of Sampling/Analysis
Floating Particulates	Visual	Surface	Quarterly
Grease and Oil	Visual	Surface	Quarterly
Discoloration	Visual	Surface	Quarterly

¹⁶ For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000 MPN/100mL. The detection methods used for each analysis shall be reported with the results of the analysis.

¹⁷ Detection methods used for Total and Fecal Coliform shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method approved by USEPA and determined appropriate by the Executive Officer.

¹⁸ Detection methods used for Enterococcus shall be those presented in EPA publication EPA 600/4-85/076, "Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure", or any improved method approved by EPA and determined appropriate by the Executive Officer.

Natural light and/or total irradiance	Light transmissivity and/or irradiance total	Entire column	water	Quarterly
Dissolved Oxygen	mg/L	Entire column	water	Quarterly
pH	units	Entire column	water	Quarterly
Salinity	ppt	Entire column	water	Quarterly
Temperature	°C	Entire column	water	Quarterly

VIII. BENTHIC MONITORING

A. Benthic Sediment Monitoring

Benthic monitoring locations are described in Section II, *Monitoring Locations*, above. Benthic monitoring shall assess the temporal and spatial occurrence of pollutants in local marine sediments and to evaluate the physical and chemical quality of the sediments in relation to the outfall. Sediment monitoring shall be conducted annually, in October. Three grab samples shall be collected using a 0.1 m² Van Veen grab sampler at each benthic monitoring station. A composite of these three samples should be analyzed as follows:

Parameter	Units	Minimum Frequency of Sampling/Analysis
Sediment particle size	phi size (% volume)	Annually
Organic Matter	volatile solids or TOC (mg/kg)	Annually
Biochemical Oxygen Demand	mg/L	Annually
Total Kjeldahl Nitrogen	mg/L	Annually
Grease and oil	mg/L	Annually
Aluminum	µg/kg	Annually
Iron	µg/kg	Annually
Arsenic	µg/kg	Annually
Cadmium	µg/kg	Annually
Total Chromium	µg/kg	Annually
Copper	µg/kg	Annually
Lead	µg/kg	Annually
Mercury	µg/kg	Annually
Nickel	µg/kg	Annually
Silver	µg/kg	Annually
Zinc	µg/kg	Annually

Parameter	Units	Minimum Frequency of Sampling/Analysis
Nonchlorinated Phenolics	µg/kg	Once in the life of permit (2009)
Chlorinated Phenolics	µg/kg	Once in the life of permit (2009)
Aldrin	µg/kg	Once in the life of permit (2009)
Dieldrin	µg/kg	Once in the life of permit (2009)
Chlordane	µg/kg	Once in the life of permit (2009)
DDT, DDE, DDD	µg/kg	Once in the life of permit (2009)
Endrin	µg/kg	Once in the life of permit (2009)
PAHs	µg/kg	Once in the life of permit (2009)
PCBs	µg/kg	Once in the life of permit (2009)
Toxaphene	µg/kg	Once in the life of permit (2009)

When processing samples for analysis, macrofauna and large remnants greater than 0.25 inches (0.64 cm) should be removed, taking care to avoid contamination.

Sediment samples shall be analyzed according to Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods (EPA 430/9-86-004, 1987) and Analytical Methods for USEPA Priority Pollutants and 301(h) Pesticides in Estuarine and Marine Sediments (EPA 503-6-90-004), 1986).

All sediment metal chemistry results shall be reported in the raw form and expressed on a dry weight basis. For all non-detect results, parameter detection limits shall be reported. Dry weight concentration target detection levels are indicated for National Oceanic and Atmospheric Administration (NOAA) National Status and Trends Program analyses.

Benthic monitoring results shall be included in the annual report with a complete discussion of benthic sediment survey results and potential influence of the discharge on sediment conditions in the study area. The discussion should be based on graphical, tabular, and/or appropriate statistical analyses of spatial and temporal patterns observed for raw sediment parameters. The annual report should also present an analysis of natural variation in sediment conditions, etc., which could influence the validity of study results. The Discharger's sediment results may also be compared with the results of other applicable studies, numeric protective levels, etc., as appropriate.

Survey results shall be compared to pre-discharge and/or historical data using appropriate statistical methods.

B. Benthic Community Monitoring

Benthic infaunal organisms shall be monitored annually, in October, at the benthic monitoring stations described in Section II, *Monitoring Locations*, above. Benthic infaunal monitoring shall assess the temporal and spatial status of local benthic communities in relation to the outfall. Sampling shall be conducted as follows:

1. Collection: Five replicate samples shall be collected at each station using a 0.1 m² Van-Veen grab sampler.
2. For benthic infauna analyses, each replicate sample shall be passed through a 1 mm screen, and the organisms retained and preserved as appropriate for subsequent identification. It is recommended that sample preservation, sample processing, and data analyses be conducted according to Quality Assurance and Quality Control (QA/QC) for 301(h) Monitoring Programs: Guidance on Field and Laboratory Methods (EPA 430/9-86-004, 1987).
3. Benthic infauna from each replicate sample shall be counted and identified to the lowest possible taxon. For each replicate sample, number of individuals, number of species, and number of individuals per species, and within each major taxonomic group (polychaetes, molluscs, crustaceans, echinoderms, and all other macroinvertebrates) shall be recorded.
4. The annual report shall include a complete discussion of benthic infaunal survey results and (possible) influence of the outfall on benthic infauna communities in the study area. The discussion should be based on graphical, tabular, and/or appropriate statistical analyses of spatial and temporal patterns. Temporal trends in the number of individuals, number of species, number of individuals per species, and community structure indices, species richness (S), Margalef index (d), Shannon-Wiener index (H'), Brillouin index (h), Simpson's Index (SI), Swartz's dominance, and Infaunal Trophic Index (ITI) shall be reported. The annual report should also present an analysis of natural community variation including the effects of different sediment conditions, oceanic seasons, and water temperatures, etc., that could influence the validity of study results. Survey results shall be compared to pre-discharge and/or historical data using appropriate statistical methods.

IX. BIOSOLIDS MONITORING

The following information shall be submitted with the Annual Report required by Standard Provision C.16. Adequate detail should be included to characterize biosolids in accordance with 40 CFR 503.

1. A representative sample of residual solids (biosolids) shall be obtained from the last point in the handling process (i.e., in the drying beds just prior to removal). All

constituents shall be analyzed annually for total concentrations for comparison with TTLC criteria. The Waste Extraction Test shall be performed on any constituent when the total concentration of the waste exceeds ten times the STLC limit for that substance. Twelve (12) discrete representative samples shall be collected at separate locations in the biosolids ready for disposal. These 12 samples shall be composited to form one (1) sample for constituent analysis. For accumulated, previously untested biosolids, the Discharger shall develop a representative sampling plan including number and location of sampling points, and collect representative samples. The analysis shall test for the metals required in 40 CFR 503.16 (for land application) or 503.26 (for surface disposal), using the methods in *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (EPA Publication SW-846, all applicable editions and updates), as required in 503.8(b)(4), at the minimum frequencies established therein, provided in the table below.

Table E-6. Amount of Biosolids and Frequency for Analysis

Amount ^[1] (dry metric tons/ 365-day period)	Frequency ^[2]
Greater than zero, but less than 290	Once per year.
Equal to or greater than 290 but less than 1500	Once per quarter (four times per year)
Equal to or greater than 1500 but less than 15,000	Once per sixty days (six times per year)
Greater than 15,000	Once per month (twelve times per year)

1. - For land application, either the amount of bulk biosolids applied to the land or the amount prepared for sale or give-away in a bag or other container for application to the land (dry weight basis). If the Discharger's biosolids are directly land applied without further treatment by another preparer, biosolids shall also be tested for organic-N, ammonium-N, and nitrate-N at the frequencies required. For surface disposal, the amount of biosolids placed on an active sludge unit (dry weight basis).
- 2 - Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids shall be analyzed annually for the constituents in the following table.

Table E-7. Biosolids Monitoring

Constituent	Units	Type of Sample	Sampling/Analysis Frequency
Quantity Removed	Tons or yds ³	Measured	Continual
Pathogen Density			per 40 CFR 503
Location of Reuse/Disposal	General Public or Specific Site		
Moisture Content	%	Grab	Annually
pH	Standard Units	Grab	Annually
Total Kjeldahl Nitrogen	mg/kg (dry) ^[1]	Grab	Annually
Ammonia(N)	mg/kg	Grab	Annually

Nitrate(N)	mg/kg	Grab	Annually
Total Phosphorus	mg/kg	Grab	Annually
Grease and Oil	mg/kg	Grab	Annually
Arsenic	mg/kg	Grab	Annually
Boron	mg/kg	Grab	Annually
Cadmium	mg/kg	Grab	Annually
Copper	mg/kg	Grab	Annually
Chromium (Hexavalent)	mg/kg	Grab	Annually
Lead	mg/kg	Grab	Annually
Mercury	mg/kg	Grab	Annually
Molybdenum	mg/kg	GRab	Annually
Nickel	mg/kg	Grab	Annually
Selenium	mg/kg	Grab	Annually
Silver	mg/kg	Grab	Annually
Zinc	mg/kg	Grab	Annually
Priority Pollutants (excluding asbestos)	mg/kg	Grab	Annually

1 - Total sample (including solids and any liquid portion) to be analyzed and results reported as mg/kg based on the dry weight of the sample.

2. Prior to land application, the Discharger shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 CFR 503.32 (unless transferred to another preparer who demonstrates pathogen reduction.) Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day. If pathogen reduction is demonstrated using a "Process to Significantly/Further Reduce Pathogens" (PFRP), the Discharger shall maintain daily records of the operating parameters to achieve this reduction.

The following applies when biosolids from the Discharger are directly land applied as Class B, without further treatment by a second preparer. If the Discharger demonstrates pathogen reduction by direct testing for fecal coliforms and/or pathogens, samples must be drawn at the frequency in the Amount/Frequency table above. If the Discharger demonstrates Class B pathogen reduction by testing for fecal coliform, at least seven grab samples must be drawn and analyzed during each monitoring event, and a geometric mean calculated from these seven samples. If the Discharger demonstrates Class A pathogen reduction by testing for fecal coliform and/or salmonella, plus one of the PFRP processes or testing for enteric viruses and helminth ova at least four samples of fecal coliform or salmonella must be drawn during each monitoring event. All four samples must meet the limits specified in 40 CFR 503.32(a).

3. For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in 40 CFR 503.33(b).
4. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the regional Administrator) and Federal facilities with greater than five MGD influent flow shall sample biosolids for pollutants listed under Section 307(a) of the CWA (as required in the pretreatment section of the permit for POTWs with pretreatment programs). Class 1 facilities and Federal facilities greater than 5 MGD shall test dioxins/dibenzofurans using a detection limit of less than one pg/g at the time of their next priority pollutant scan if they have not done so within the past five years, and once per five years thereafter.
5. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness. All constituents regulated under CCR Title 22, division 5, chapter 11, article 3 shall be analyzed for comparison with Total Threshold Limit Concentration (TTLC) criteria. The Waste Extraction Test shall be performed on any constituent when the total concentration of the waste exceeds ten times the Soluble Threshold Limit Concentration (STLC) limit for that substance.
6. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.
7. Biosolids placed in a municipal landfill shall be tested by the Paint Filter Liquids Test (EPA Method 9095) at the frequency determined by Table E-8, or more often if necessary to demonstrate that there are no free liquids.
8. The Discharger, either directly or through contractual agreements with their biosolids management contractors, shall comply with the following notification requirements:
 - a. *Notification of non-compliance.* The Discharger shall notify EPA Region 9, the Central Coast Water Board, and the Regional Board located in the region where the biosolids are used or disposed, of any non-compliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall notify EPA Region 9 and the affected Regional Water Quality Boards of any non-compliance in writing within five working days of becoming aware of the non-compliance. The Discharger shall require their biosolids management contractors to notify EPA Region 9 and the affected Regional Water Quality Boards of any non-compliance within the same time frames.
 - b. If biosolids are shipped to another State or Indian lands, the Discharger must send notice at least 60 days prior to the shipment to the permitting authorities in the receiving State or Indian land (the EPA Regional Office for that area and the State/Indian authorities).

- c. *For land application (in cases where Class B biosolids are directly applied without further treatment):* Prior to reuse of any biosolids from the Discharger's facility to a new or previously unreported site, the Discharger shall notify EPA, the Central Coast Water Board, and any other affected Regional Water Quality Board. The notification shall include description of the crops or vegetation to be grown, proposed loading rates and determination of agronomic rates.

~~If any biosolids within a given monitoring period do not meet 40 CFR 503.13 metals concentrations limits, the Discharger (or its contractor) must pre-notify EPA, and determine the cumulative metals loading to that site to date, as required in 40 CFR 503.12. The Discharger shall notify the applier of all the applier's requirements under 40 CFR 503, including the requirement that the applier certify that the management practices, site restrictions, and any applicable vector attraction reduction requirements have been met. The Discharger shall require the applier to certify at the end of 38 months following application of Class B biosolids that the harvesting restrictions in effect for up to 38 months have been met.~~

- d. *For surface disposal:* Prior to disposal to a new or previously unreported site, the Discharger shall notify EPA and the Central Coast Water Board. The notice shall include a description and a topographic map of the proposed site, depth to groundwater, whether the site is lined or unlined, site operator, site owner, and any State or local permits. The notice shall describe procedures for ensuring public access and grazing restrictions for three years following site closure. The notice shall include a groundwater monitoring plan or description of why groundwater monitoring is not required.

9. The Discharger shall submit an annual biosolids report to the EPA Region 9 Biosolids Coordinator and Central Coast Water Board by February 19th of each year (per USEPA guidance and 40 C.F.R. 503) for the period covering the previous calendar year. This report shall include:

- a. Annual biosolids removed in dry tons and percent solids.
- b. If appropriate, a narrative description of biosolids dewatering and other treatment processes, including process parameters, including a schematic diagram showing biosolids handling facilities. For example, if drying beds are used, report depth of application and drying time. If composting is used, report the temperature achieved and duration.
- c. A description of disposal methods, including the following information as applicable related to the disposal methods used at the facility. If more than one method is used, include the percentage and tonnage of annual biosolids production disposed by each method.

- (1) For landfill disposal include: 1) the Central Coast Water Board WDR numbers that regulate the landfills used, 2) the present classifications of the landfills used, 3) the results of any groundwater monitoring, 4)

certifications of management practices, and 5) the names and locations of the facilities receiving biosolids.

(2) For land application include: 1) the location of the site(s), 2) the Central Coast Water Board's WDR numbers that regulate the site(s), 3) the application rate in lbs/acre/year (specify wet or dry), 4) certifications of management practices and site restrictions, and 5) subsequent uses of the land.

(3) For offsite application by a licensed hauler and composter include: 1) the name, address and USEPA license number of the hauler and composter.

- d. Copies of analytical data required by other agencies (i.e. USEPA or County Health Department) and licensed disposal facilities (i.e. landfill, land application, or composting facility) for the previous year.
- e. Descriptions of pathogen reduction methods and vector attraction reduction methods. Including supporting time and temperature data, and certifications, as required in 40 CFR 503.17 and 503.27.
- f. Names, mailing address, and street addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other use or disposal methods not covered above, and amounts delivered to each.
- g. For all biosolids used or disposed at the Discharger's facility, the site and management practice information and certification required in 40 CFR 503.17 and 503.27.
- h. For all biosolids temporarily stored, the information required in 40 CFR 503.20 is required to demonstrate temporary storage.
- i. Reports shall be submitted to:

Regional Biosolids Coordinator
USEPA (WTR-7)
75 Hawthorne St.
San Francisco, CA 94105-3901

Executive Officer
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906

X. OUTFALL AND DIFFUSER INSPECTION

The Discharger shall conduct an inspection of the outfall pipe/diffuser system annually to ensure the proper operation and structural integrity of the system. This inspection shall