STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL COAST REGION 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401-5411

MONITORING AND REPORTING PROGRAM NO. R3-2005-0003

NPDES PERMIT NO. CA0048194

Waste Discharger Identification No. 3 440102001 Proposed for Consideration at the May 13, 2005 Meeting

FOR

WASTEWATER TREATMENT PLANT CITY OF SANTA CRUZ, SANTA CRUZ COUNTY

I. INFLUENT MONITORING

The Discharger shall establish sampling stations at each point of inflow to the treatment plant, and shall locate stations upstream of any in-plant return flows where representative influent samples can be obtained. Table 1, below, specifies the influent monitoring program:

TABLE 1
Influent Monitoring

initiatit Monitoring				
Parameter	Units	Sample Type	Min. Analysis Frequency	
Daily Flow	Million Gallons per	Metered	Daily	
	Day (MGD)			
Instantaneous Flow	MGD	Metered	Daily	
Maximum Daily Flow	MGD	Metered	Daily	
Mean Daily Flow	MGD	Calculated	Monthly	
Mean Daily pH	pH Units	Metered	Daily	
Maximum Daily pH	pH Units	Metered	Daily	
Minimum Daily pH	pH Units	Metered	Daily	
CBOD, 5-day	mg/L	24-hr Composite	Every sixth day	
Total Suspended Solids	mg/L	24-hr Composite	Every sixth day	
Toxic Pollutants	Units per Table B	30-day HVWS ²	Annually ¹	

- 1. Annual influent samples shall be collected according to the following schedule: October 2005, September 2006, August 2007, July 2008, and June 2009
- 2. Integrative High Volume Water Sampling

II. EFFLUENT MONITORING

The Discharger shall collect representative effluent samples after the last point of treatment. Where influent and effluent sampling results will be compared to determine compliance, the Discharger shall collect effluent samples during peak plant loading conditions.

TABLE 2
Major Wastewater Constituents and Properties

Wajor wastewater Constituents and Properties					
Parameter	Units	Sample Type	Min. Analysis Frequency		
Daily Flow	Million Gallons	Metered	Daily		
	per Day (MGD)				
Instantaneous Flow	MGD	Metered	Daily		
Maximum Daily Flow	MGD	Metered	Daily		
Mean Daily Flow	MGD	Calculated	Monthly		
CBOD ₅ (BOD ₅ , if reported)	mg/L	24-hr Composite	Every sixth day		
Total Suspended Solids	mg/L	24-hr Composite	Every sixth day		
Settleable Solids	mL/L	Grab	Twice weekly		
Temperature	°C	Grab	Twice weekly		
Total & Fecal	CFU/100 mL	Grab	Weekly ¹		
Coliform ^{2, 3, 7}					
Enterococci Organisms ^{2,5,7}	CFU/100 mL	Grab	Weekly ¹		
Total Chlorine Residual ⁶	mg/L	Continuous	Continuous		
pН	pH units	Metered	Daily		
Oil & Grease	mg/L	Grab	Monthly		
Turbidity	NTU	Grab	Monthly		
Ammonia	mg/L	Grab	Monthly		
Nitrate (as N)	mg/L	Grab	Monthly		
Urea	mg/L	Grab	Monthly		
Silicate	mg/L	Grab	Monthly		
Total Phenolic Compounds	μg/L	Grab	Quarterly (Jan, Apr, Jul, Oct)		
Total Sulfides	mg/L	Grab	Quarterly (Jan, Apr, Jul, Oct)		
Acute Toxicity 8	TUa	24-hr Composite	Quarterly (Jan, Apr, Jul, Oct)		
Chronic Toxicity 9	TUc	24-hr Composite	Quarterly (Jan, Apr, Jul, Oct)		

- 1. Total coliform, fecal coliform, and enterococcus effluent monitoring apply if the Executive Officer concludes from the bacterial assessment described in this monitoring program (Section III.A 30-foorContour Bacterial Assessment) that the discharge violates Receiving Water Limitation C.1 of Order No. R3-2005-003.
- 2. The unit of measurement for bacterial testing shall be Colony Forming Units (CFU/100mL) or Most Probable Number (MPN)/100 mL.
- For bacterial analyses, sample dilutions shall be performed so the range of bacterial density values extends from 1.0 to >160,000 CFU/100 mL. The detection methods used for each analysis shall be reported with the results of the analysis.
- 4. Detection methods used for coliforms (total and fecal) shall be those in Table 1A of 40CFR136, unless USEPA approves alternate methods.
- Detection methods used for enterococcus shall be those in EPA 600/4-85/076, <u>Test Methods for Escherichia coli and Enterococci in Water By Membrane Filter Procedure</u>, or another method determined by the Regional Board to be appropriate.
- 6. The Discharger shall monitor effluent continually for total chlorine residual when chlorine disinfection is occurring. The Discharger shall review continuous monitoring strip charts and submit a summary (chlorine residual daily range, and daily average) to the Regional Board with monthly monitoring reports. Grab samples for compliance with effluent limits may be collected at the last accessible measurement location before discharge to the ocean.

- 7. On rare occasions, the Discharger may determine microbial concentrations by means of the Multiple Tube Fermentation procedure, which results are reported as Most Probable Number (MPN)/100 mL.
- 8. Compliance with acute toxicity effluent limitations (TUa) shall be determined in accordance with *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*. Acute toxicity monitoring shall be conducted using marine test species instead of freshwater species when measuring compliance.

Acute Toxicity (TUa) = 100/96-hr LC 50. LC 50 (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques. The Discharger shall use one of the approved marine test species identified in EPA-821-R-02-012, preferably Silversides (Menidia beryllina). However, with justification, the Discharger may use other approved marine test species in EPA-821-R-02-012, if approval by the Executive Officer. Use of Sheepshead Minnow (Cyprinodon variegatus) with pH correction instead of Menidia beryllina when performing acute toxicity testing is acceptable.

If the Discharger demonstrates that identifiable substances in the discharge are rapidly rendered harmless upon discharge to the marine environment, but not as result of dilution, the LC 50 may be determined after the 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:

$$TUa = [log(100 - S)]/1.7$$

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

9. Chronic Toxicity (TUc) = 100/NOEL. The No Observed Effect Level (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 to measure TUc. In accordance with the 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 Resources Control Board review and approval. A minimum of three 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, monitoring can be reduced to the most sensitive species. Dilution and control water should be obtained from pristine receiving waters. The test organisms' sensitivity to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

Approved Tests - Chronic Toxicity TUc (Table III-1 from Appendix III of the Ocean Plan) **Effect Species Tier** Reference giant kelp, Macrocystis pyrifera percent germination; 1.3 germ tube length red abalone, Haliotis rufescens Abnormal shell development 1 1,3 oyster, Crassostrea gigas; mussels, Abnormal shell development; 1 1,3 Mytilus spp. percent survival Percent normal development 1,3 urchin, Strongylocentrotus 1 purpuratus; sand dollar, Dendraster excentricus Percent fertilization 1 1,3 urchin, Strongylocentrotus purpuratus; sand dollar, Dendraster

Approved Tests – Chronic Toxicity TUc (Table III-1 from Appendix III of the Ocean Plan)

	(Tuble III I II oii Appendix III of the		
<u>Species</u>	<u>Effect</u>	<u>Tier</u>	<u>Reference</u>
excentricus			
shrimp, Holmesimysis costata	Percent survival; growth	1	1,3
shrimp, Mysidopsis bahia	Percent survival; growth; fecundity	2	2,4
topsmelt, Atherinops affinis	Larval growth rate; percent survival	1	1,3
Silversides, Menidia beryllina	Larval growth rate; percent survival	2	2,4

Approved Tests - Chronic Toxicity TUc Table Notes:

The first tier test methods are the preferred toxicity tests for compliance monitoring. The Regional Board may approve the use of a second tier test method if first tier organisms are not available.

<u>Protocol References from the Approved Tests - Chronic Toxicity TUc Table</u>

- 1. 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. U.S. EPA Report No. EPA/600/R-95/136.
- Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 2002. Short-term methods for estimating the chronic toxicity of effluents and receiving water to marine and estuarine organisms. U.S. EPA Report No. EPA-821-R-02-013
- 3. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.
- Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler (eds). 1988. 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.

TABLE 3
Ocean Plan Table B Pollutants – Protection of Marine Aquatic Life

Parameter	Units	Sample Type	Min. Analysis Frequency ²
Arsenic	μg/L	30-day HVWS ¹	Semiannually
Cadmium	μg/L	30-day HVWS ¹	Semiannually
Chromium Total	μg/L	30-day HVWS ¹	Semiannually
Chromium (Hexavalent)	μg/L	30-day HVWS ¹	Semiannually
Copper	μg/L	30-day HVWS ¹	Semiannually
Iron	μg/L	30-day HVWS ¹	Semiannually
Lead	μg/L	30-day HVWS ¹	Semiannually
Mercury	μg/L	30-day HVWS ¹	Semiannually
Nickel	μg/L	30-day HVWS ¹	Semiannually
Selenium	μg/L	30-day HVWS ¹	Semiannually
Silver	μg/L	30-day HVWS ¹	Semiannually
Zinc	μg/L	30-day HVWS ¹	Semiannually
Cyanide	μg/L	30-day HVWS ¹	Semiannually
Phenolic Compounds	μg/L	30-day HVWS ¹	Semiannually
(non-chlorinated)			
Chlorinated Phenolics	μg/L	30-day HVWS ¹	Semiannually
Endosulfan	μg/L	30-day HVWS ¹	Semiannually
Endrin	μg/L	30-day HVWS ¹	Semiannually

TABLE 3
Ocean Plan Table B Pollutants – Protection of Marine Aquatic Life

Parameter	Units	Sample Type	Min. Analysis Frequency ²
НСН	μg/L	30-day HVWS ¹	Semiannually
Radioactivity	pci/L	30-day HVWS ¹	Semiannually

¹ Integrative High Volume Water Sample

TABLE 4
Ocean Plan Table B Pollutants – Protection of Human Health (Non-Carcinogens)

Parameter	Units	Sample Type	Min. Analysis Frequency
Acrolein	μg/L	30-day HVWS ¹	Semiannually ²
Antimony	μg/L	30-day HVWS ¹	Semiannually ²
Bis (2-chloroethoxy) methane	μg/L	30-day HVWS ¹	Semiannually ²
Bis(2-chloroisopropyl) ether	μg/L	30-day HVWS ¹	Semiannually ²
Chlorobenzene	μg/L	30-day HVWS ¹	Semiannually ²
Chromium (III)	μg/L	30-day HVWS ¹	Semiannually ²
Di-n-butyl phthalate	μg/L	30-day HVWS ¹	Semiannually ²
Dichlorobenzenes	μg/L	30-day HVWS ¹	Semiannually ²
1,1,-Dichloroethylene	μg/L	30-day HVWS ¹	Semiannually ²
Diethyl phthalate	μg/L	30-day HVWS ¹	Semiannually ²
Dimethyl phthalate	μg/L	30-day HVWS ¹	Semiannually ²
4,6-Dinitro-2-methyl phenol	μg/L	30-day HVWS ¹	Semiannually ²
2,4-Dinitrophenol	μg/L	30-day HVWS ¹	Semiannually ²
Ethylbenzene	μg/L	30-day HVWS ¹	Semiannually ²
Fluoranthene	μg/L	30-day HVWS ¹	Semiannually ²
Hexachlorocyclopentadiene	μg/L	30-day HVWS ¹	Semiannually ²
Isophorone	μg/L	30-day HVWS ¹	Semiannually ²
Nitrobenzene	μg/L	30-day HVWS ¹	Semiannually ²
Thallium	μg/L	30-day HVWS ¹	Semiannually ²
Toluene	μg/L	30-day HVWS ¹	Semiannually ²
1,1,2,2,-Tetrachloroethane	μg/L	30-day HVWS ¹	Semiannually ²
Tributyltin	μg/L	30-day HVWS ¹	Semiannually ²
1,1,1-Trichloroethane	μg/L	30-day HVWS ¹	Semiannually ²
1,1,2-Trichloroethane	μg/L	30-day HVWS ¹	Semiannually ²

¹ Integrative High Volume Water Sample

TABLE 5
Ocean Plan Table B Pollutants – Protection of Human Health (Carcinogens)

Parameter	Units	Sample Type	Min. Analysis Frequency
Acrylonitrile	μg/L	30-day HVWS ¹	Semiannually ²
Aldrin	μg/L	30-day HVWS ¹	Semiannually ²

The Discharger shall sample once during the dry season and once during the wet season concurrently with sampling conducted by CCLEAN.

² The Discharger shall sample once during the dry season and once during the wet season concurrent with sampling conducted by CCLEAN.

TABLE 5
Ocean Plan Table B Pollutants – Protection of Human Health (Carcinogens)

Parameter	Units	Sample Type	Min. Analysis Frequency
Benzene	μg/L	30-day HVWS ¹	Semiannually ²
Benzidine	μg/L	30-day HVWS ¹	Semiannually ²
Beryllium	μg/L	30-day HVWS ¹	Semiannually ²
Bis(2-Chloroethyl)ether	μg/L	30-day HVWS ¹	Semiannually ²
Bis(2-ethylhexyl)phthalate	μg/L	30-day HVWS ¹	Semiannually ²
Carbon tetrachloride	μg/L	30-day HVWS ¹	Semiannually ²
Chlordane	μg/L	30-day HVWS ¹	Semiannually ²
Chloroform	μg/L	30-day HVWS ¹	Semiannually ²
DDT	μg/L	30-day HVWS ¹	Semiannually ²
1,4-Dichlorobenzene	μg/L	30-day HVWS ¹	Semiannually ²
3,3-Dichlorobenzidine	μg/L	30-day HVWS ¹	Semiannually ²
1,2-Dichloroethane	μg/L	30-day HVWS ¹	Semiannually ²
Dichloromethane	μg/L	30-day HVWS ¹	Semiannually ²
1,3-Dichloropropene	μg/L	30-day HVWS ¹	Semiannually ²
Dieldrin	μg/L	30-day HVWS ¹	Semiannually ²
2,4-Dinitrotoluene	μg/L	30-day HVWS ¹	Semiannually ²
1,2-Diphenylhydrazine	μg/L	30-day HVWS ¹	Semiannually ²
Halomethanes	μg/L	30-day HVWS ¹	Semiannually ²
Heptachlor	μg/L	30-day HVWS ¹	Semiannually ²
Hexachlorobenzene	μg/L	30-day HVWS ¹	Semiannually ²
Hexachlorobutadiene	μg/L	30-day HVWS ¹	Semiannually ²
Hexachloroethane	μg/L	30-day HVWS ¹	Semiannually ²
N-Nitrosodimethylamine	μg/L	30-day HVWS ¹	Semiannually ²
N-Nitrosodiphenylamine	μg/L	30-day HVWS ¹	Semiannually ²
PAHs	μg/L	30-day HVWS ¹	Semiannually ²
PCBs	μg/L	30-day HVWS ¹	Semiannually ²
TCDD Equivalents	μg/L	30-day HVWS ¹	Semiannually ²
Tetrachloroethylene	μg/L	30-day HVWS ¹	Semiannually ²
Toxaphene	μg/L	30-day HVWS ¹	Semiannually ²
Trichloroethylene	μg/L	30-day HVWS ¹	Semiannually ²
2,4,6-Trichlorophenol	μg/L	30-day HVWS ¹	Semiannually ²
Vinyl chloride	μg/L	30-day HVWS ¹	Semiannually ²

- 1 Integrative High Volume Water Sample
- 2 The Discharger shall sample once during the dry season and once during the wet season concurrent with sampling conducted by CCLEAN.

III. RECEIVING WATER MONITORING

The Discharger shall participate in the Central Coast Long-term Environmental Assessment Network (CCLEAN).

The Receiving Water Monitoring Program consists of the following components:

- A. 30-Foot contour Bacterial Monitoring
- B. Ocean Outfall and Diffuser Monitoring
- C. CCLEAN Program

- 1) Bottom sediment sampling
- 2) Benthic biota sampling
- 3) Mussel bioaccumulation sampling
- 4) Stream and river mouth sampling
- 5) Solid Phase Extraction Column sampling of effluent and rivers.

A. 30-Foot Contour Bacterial Monitoring

TABLE 6
30-foot contour sampling stations

Station Name	Location
A	Point Santa Cruz
С	Surf at old outfall line
Е	610 meters west of the outfall line crossing the beach
F	Natural Bridges State Beach
G	Terrace Point
Н	1,180 meters upcoast of Terrace Point
I	2,080 meters upcoast of Terrace Point

Latitude and Longitude coordinates shall be provided for all stations when reporting. The Regional Board may add, delete, or relocate stations.

Bacterial sampling at the 30-foot depth contour shall be performed in accordance with Table 8 below.

Monitoring shall include measurements of wind direction and speed, weather, rainfall over the preceding seven days, sea conditions, alongshore current direction and speed, and tidal conditions. Observations of water discoloration, floating oil and grease, turbidity, odor, materials of sewage origin in the water or on the beach, and temperature (°C) shall be recorded and reported.

TABLE 7
Bacterial Sampling

Parameter	Units	Sampling Stations	Min. Analysis Frequency
Total & Fecal Coliform, and	CFU/100 mL ⁶	A-G	Monthly ⁴
Enterococci Organisms ^{1, 2, 3}			
Surf Conditions	Narrative	A-G	Monthly ⁴
Ocean Current Direction	Narrative	A-G	Monthly ⁴

- For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 1.0 to > 160,000 CFU/100ml. The detection methods used for each analysis shall be reported with the results of the analysis.
- 2 Detection methods used for total and fecal coliform shall be those in the most recent edition of "Standard Methods for the Examination of Water and Wastewater", or any improved method determined by the Regional Board (and approved by EPA) to be appropriate.
- 3 Detection methods used for enterococcus shall be those in EPA 600/4-85/076, "Test Methods for Escherichia Coli and Enterococci in Water by Membrane Filter Procedure", or any improved method determined by the Regional Board to be appropriate.
- 4 Samples shall be collected at least weekly from each site during each 30-day period, with sampling intervals evenly spaced, contingent upon tidal conditions. The geometric mean shall be calculated using the five most recent sample results
- 5 If a single sample exceeds any of the following densities, repeat sampling at that 30-foot contour location and the corresponding shore station will be conducted daily. Repeat sampling shall be conducted until the sample result is

less than the following densities, or until a sanitary survey is conducted to determine the source of the high bacterial densities, when one of the following conditions occurs:

- a. Total coliform density exceeds 10,000 per 100 mL; or
- b. Fecal coliform density exceeds 400/100mL; or
- c. Total coliform density exceeds 1,000/100mL when the ratio of fecal/total coliform exceeds 0.1; or
- d. Enterococcus density exceeds 104/100mL.
- 6. On rare occasions, the Discharger may determine microbial concentrations by means of the Multiple Tube Fermentation procedure, which results are reported as Most Probable Number (MPN)/100 mL.

B. Ocean Outfall and Diffuser Monitoring

At least annually (in the same month) the Discharger shall visually inspect the entire outfall structure to note its structural integrity and whether there are leaks, potential leaks, or malfunctions. The outfall inspection will also check for possible external blockage of ports by sand and/or silt deposition. Results of the outfall inspection shall be reported in the applicable annual report. The month for inspection specified by the Discharger shall be a month of good underwater visibility.

C. Central Coast Long-Term Environmental Assessment Network (CCLEAN)

The Discharger shall participate in the CCLEAN Regional Monitoring Program:

Table 9 below outlines the general components of the CCLEAN Program's first phase.

Before sampling begins, the Discharger shall submit, for the approval of the Executive Officer, the CCLEAN Quality Assurance Project Plan (QAPP) for each year. The QAPP shall include a detailed study design description, including sample site locations and a description of the specific contents of the CCLEAN Annual Report.

 $\frac{Table\ 8}{Sampling\ sites,\ parameters\ sampled,\ sampling\ frequency,}$ and relevant program objectives in Phase I of CCLEAN

Sampling Sites	Parameters Sampled at Each Site	Frequency of Sampling	Applicable Water-quality Stressors	Program Objectives
Water Sampling				Y
Four outfall sites (Santa Cruz, Watsonville, Monterey, Carmel) in effluent Beginning 2002 - Four river sites (San Lorenzo, Pajaro, Salinas, Carmel) near mouths	30-day flow proportioned samples using automated pumping equipment, solid-phase-extraction techniques for: 1) persistent organic pollutants, and weekly grab samples of effluent and recording probes in rivers for 2) ammonia and nitrate, 3) turbidity, 4) temperature, conductivity, pH	Twice per year (wet season and dry season)	Persistent Organic Pollutants Nutrients Suspended Sediments in Rivers	III, IV
	Grabs for urea, nitrate, and silicate in effluent	Monthly	Nutrients	III, IV
	Evaluate satellite imagery for algal blooms	Periodically	Nutrients (effects of)	I, III, IV
30-ft contour sites for each major discharge and sites sampled for AB 411	Grabs for total and fecal coliform, enterococcus	Monthly	Pathogens	I, II, III, IV
Approximately 20 streams and rivers	Grabs for: 1) total and fecal coliform and enterococcus, 2) nitrates, urea, silicate, 3) total suspended solids	Monthly	Pathogens Nutrients Suspended Sediments in Rivers	I, II, III
Sediment Sampling				
Four depositional sites and four background sites along 80-m contour	Single samples for benthic infauna, persistent organic pollutants, total organic carbon and grain size	Annually	Persistent Organic Pollutants (and effects of)	I, II
Mussel Sampling				
5 rocky intertidal sites	One composite of 30-40 mussels for persistent organic pollutants, total and fecal coliform, and enterococcus	Twice per year (wet season and dry season)	Persistent Organic Pollutants Pathogens	I, II, III

IV. MINIMUM LEVELS

The Minimum Levels (MLs) identified in the 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. These MLs were derived from data provided by state-certified analytical laboratories in 1997 and 1998 for pollutants regulated by the California Ocean Plan and shall be used until new values are adopted by the State Water Resources Control Board. Tables 10 through 13 of this MRP list the applicable MLs in four major chemical groupings: volatile chemicals, semi-volatile chemicals, inorganics, pesticides & PCB's. "No Data" is indicated by "--".

The Discharger shall instruct its laboratories to establish calibration standards so the ML (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. The Discharger's laboratory may employ a calibration standard lower than the ML in accordance with the Ocean Plan, Section C.4.b, *Deviations from Minimum Levels in Appendix II*.

TABLE 9
Minimum Levels – Volatile Chemicals
(Table II-1 from Appendix II of the Ocean Plan)

		Minimum Level (µg/L)		
Volatile Chemicals	CAS Number	GC Method ^{a,} *	GCMS Method b, *	
Acrolein	107028	2	5	
Acrylonitrile	107131	2	2	
Benzene	71432	0.5	2	
Bromoform	75252	0.5	2	
Carbon Tetrachloride	56235	0.5	2	
Chlorobenzene	108907	0.5	2	
Chlorodibromomethane	124481	0.5	2	
Chloroform	67663	0.5	2	
1,2-Dichlorobenzene (volatile)	95501	0.5	2	
1,3-Dichlorobenzene (volatile)	541731	0.5	2	
1,4-Dichlorobenzene (volatile)	106467	0.5	2	
Dichlorobromomethane	75274	0.5	2	
1,1-Dichloroethane	75343	0.5	1	
1,2-Dichloroethane	107062	0.5	2	
1,1-Dichloroethylene	75354	0.5	2	
Dichloromethane	75092	0.5	2	
1,3-Dichloropropene (volatile)	542756	0.5	2	
Ethyl benzene	100414	0.5	2	
Methyl Bromide	74839	1	2	
Methyl Chloride	74873	0.5	2	
1,1,2,2-Tetrachloroethane	79345	0.5	2	
Tetrachloroethylene	127184	0.5	2	
Toluene	108883	0.5	2	

1,1,1-Trichloroethane	71556	0.5	2
1,1,2-Trichloroethane	79005	0.5	2
Trichloroethylene	79016	0.5	2
Vinyl Chloride	75014	0.5	2

Table 10 Notes:

- a) GC Method = Gas Chromatography
- b) GCMS Method = Gas Chromatography / Mass Spectrometry
- * To determine the lowest standard concentration in an instrument calibration curve for these techniques, use the given ML (see Ocean Plan, Chapter III, Section C.5, *Use of Minimum Levels*).

TABLE 10
Minimum Levels – Semi Volatile Chemicals
(Table II-2 from Appendix II of the Ocean Plan)

		Minimum Level (μg/L)				
Semi-Volatile Chemicals	CAS Number	GC Method ^{a,} *	GCMS Method ^{b,} *	HPLC Method ^{c,} *	COLOR Method ^d	
Acenapthylene	208968		10	0.2		
Anthracene	120127		10	2		
Benzidine	92875		5			
Benzo(a)anthracene	56553		10	2		
Benzo(a)pyrene	50328		10	2		
Benzo(b)fluoranthene	205992		10	10		
Benzo(g,h,i)perylene	191242		5	0.1		
Benzo(k)floranthene	207089		10	2		
Bis 2-(1-Chloroethoxy) methane	111911		5			
Bis(2-Chloroethyl)ether	111444	N/A	1			
Bis(2-Chloroisopropyl)ether	39638329	10	2			
Bis(2-Ethylhexyl) phthalate	117817	10	5			
2-Chlorophenol	95578	2	5			
Chrysene	218019		10	5		
Di-n-butyl phthalate	84742		10			
Dibenzo(a,h)anthracene	53703		10	0.1		
1,2-Dichlorobenzene (semivolatile)	95504	2	2			
1,3-Dichlorobenzene (semivolatile)	541731	2	1			
1,4-Dichlorobenzene (semivolatile)	106467	2	1			
3,3-Dichlorobenzidine	91941		5			
2,4-Dichlorophenol	120832	1	5			
1,3-Dichloropropene	542756		5			
Diethyl phthalate	84662	10	2			

TABLE 10 Minimum Levels – Semi Volatile Chemicals (Table II-2 from Appendix II of the Ocean Plan)

	<u> </u>	Minimum Level (μg/L)				
Semi-Volatile Chemicals	CAS Number	GC Method ^{a,} *	GCMS Method b,*	HPLC Method ^{c,} *	COLOR Method ^d	
Dimethyl phthalate	131113	10	2			
2,4-Dimethylphenol	105679	1	2			
2,4-Dinitrophenol	51285	5	5			
2,4-Dinitrotoluene	121142	10	5			
1,2-Diphenylhydrazine	122667		1			
Fluoranthene	206440	10	1	0.05		
Fluorene	86737		10	0.1		
Hexachlorobenzene	118741	N/A	1			
Hexachlorobutadiene	87683	5	1			
Hexachlorocyclopentadiene	77474	5	5			
Hexachloroethane	67721	5	1			
Indeno(1,2,3-cd)pyrene	193395		10	0.05		
Isophorone	78591	10	1			
2-methyl-4,6-dinitrophenol	534521	10	5			
3-methyl-4-chlorophenol	59507	5	1			
N-nitrosodi-n-propylamine	621647	10	5			
N-nitrosodimethylamine	62759	10	5			
N-nitrosodiphenylamine	86306	10	1			
Nitrobenzene	98953	10	1			
2-Nitrophenol	88755		10			
4-Nitrophenol	100027	5	10			
Pentachlorophenol	87865	1	5			
Phenanthrene	85018		5	0.05		
Phenol	108952	1	1		50	
Pyrene	129000		10	0.05		
2,4,6-Trichlorophenol	88062	10	10			

Table 11 Notes:

- a) GC Method = Gas Chromatography
- b) GCMS Method = Gas Chromatography / Mass Spectrometry
- c) HPLC Method = High Pressure Liquid Chromatography
- d) COLOR Method = Colorimetric
- * To determine the lowest standard concentration in an instrument calibration curve for this technique, multiply the given ML by 1000 (see Ocean Plan, Chapter III, Section C.5, *Use of Minimum Levels*).

TABLE 11 Minimum Levels – Inorganics (Table II-3 from Appendix II of the Ocean Plan)

		Minimum Level (μg/L)								
Inorganic Substances	CAS Number	COLOR Method	DCP Method	FAA Method	GFAA Method	HYDRIDE Method ^e	ICP Method	ICPMS Method	SPGFAA Method ^h	CVAA Method
Antimony	7440360		1000	10	5	0.5	50	0.5	5	
Arsenic	7440382	20	N/A		2	1	10	2	2	
Beryllium	7440417		N/A	N/A	0.5		2	0.5	1	
Cadmium	7440439		N/A	10	0.5		10	0.2	0.5	
Chromium (total)			N/A	50	2		10	0.5	1	
Chromium (VI)	18540299	10		5						
Copper	7440508		N/A	20	5		10	0.5	2	
Cyanide	57125	5								
Lead	7439921		N/A	20	5		5	0.5	2	
Mercury	7439976							0.5		0.2
Nickel	7440020		N/A	50	5		20	1	5	
Selenium	7782492		1000		5	1	10	2	5	
Silver	7440224		N/A	10	1		10	0.2	2	
Thallium	7440280		N/A	10	2		10	1	5	
Zinc	7440666		N/A	20			20	1	10	

Table 12 Notes:

- a) COLOR Method = Colorimetric
- b) DCP Method = Direct Current Plasma
- c) FAA Method = Flame Atomic Absorption
- d) GFAA Method = Graphite Furnace Atomic Absorption
- e) HYDRIDE Method = Gaseous Hydride Atomic Absorption
- f) ICP Method = Inductively Coupled Plasma
- g) ICPMS Method = Inductively Coupled Plasma / Mass Spectrometry
- h) SPGFAA Method = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., US EPA 200.9)
- i) CVAA Method = Cold Vapor Atomic Absorption
- * To determine the lowest standard concentration in an instrument calibration curve for these techniques, use the given ML (see Ocean Plan, Chapter III, Section C.5, *Use of Minimum Levels*).

TABLE 12 Minimum Levels – Pesticides and PCB's (Table II-4 from Appendix II of the Ocean Plan)

(1000 11 11 000 11 ppoint	CAS -	Minimum Level (μg/L)
Pesticides – PCB's	Number	GC Method ^a ,*
Aldrin	309002	0.005
Chlordane	57749	0.1
4,4'-DDD	72548	0.05
4,4'-DDE	72559	0.05
4,4'-DDT	50293	0.01
Dieldrin	60571	0.01
a-Endosulfan	959988	0.02
b-Endosulfan	33213659	0.01
Endosulfan Sulfate	1031078	0.05
Endrin	72208	0.01
Heptachlor	76448	0.01
Heptachlor Epoxide	1024573	0.01
a-Hexachlorocyclohexane	319846	0.01
b-Hexachlorocyclohexane	319857	0.005
d-Hexachlorocyclohexane	319868	0.005
g-Hexachlorocyclohexane (Lindane)	58899	0.02
PCB 1016		0.5
PCB 1221		0.5
PCB 1232		0.5
PCB 1242		0.5
PCB 1248		0.5
PCB 1254		0.5
PCB 1260		0.5
Toxaphene	8001352	0.5

Table 13 Notes:

- a) GC Method = Gas Chromatography
- * To determine the lowest standard concentration in an instrument calibration curve for this technique, multiply the given ML by 100 (see Ocean Plan, Chapter III, Section C.5, *Use of Minimum Levels*).

Procedures, calibration techniques, and instrument/reagent specifications used to determine compliance with Ocean Plan Table B shall conform to the requirements of federal regulations (40CFR136, revised edition of May 14, 1999). All methods are specified in Tables 10 through 13 of this MRP.

Laboratories analyzing monitoring data shall be certified by the California Department of Health Services, in accordance with the provisions of California Water Code, Section 13176, and must include quality assurance / quality control data with their reports.

V. SAMPLE REPORTING PROTOCOLS

The Discharger shall select MLs in accordance with Section III, *Minimum Levels*, and Tables 10 through 13 of this MRP and the laboratory's current Method Detection Limit (MDL). The Discharger shall report the ML with each analytical result.

The Discharger shall report the analytical results using the following conventions:

- 1. Report analytical results greater than or equal to the ML as measured by the laboratory.
- 2. Report analytical results less than the ML, but greater than or equal to the laboratory's MDL, "Detected, but Not Quantified", or DNQ. The laboratory shall 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. Report analytical results less than the laboratory's MDL as "Not Detected", or ND.

VI. COMPLIANCE DETERMINATION

Sufficient sampling and analysis is required to determine compliance with the effluent limitations.

- 1. Compliance with Single-Constituent Effluent Limitations
 - The discharge violates the effluent limitation if the sample pollutant concentration exceeds the effluent limitation and exceeds or equals the ML.
- 2. Compliance with Effluent Limitations expressed as a Sum of Several Constituents
 - The discharge violates the effluent limitation for the sum of a group of chemicals or chemical congeners if the sum of the individual pollutant concentrations exceeds the effluent limitation. Individual pollutants of the group will be assigned a concentration of zero if the constituent is reported as ND or DNQ.
- 3. Multiple Sample Data Reduction
 - The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency of multiple sample analyses when all sample results are quantifiable. When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

VIII. BIOSOLIDS MONITORING AND REPORTING

The Discharger shall analyze a representative sample of biosolids obtained from the last point in the handling process for the constituents below in Table 14 at the frequencies listed. The sample shall be a composite sample comprised of twelve grab samples taken over a typical dewatering operational period, and from the last representative point in the solids handling process before disposal.

The biosolids monitoring program shall be in accordance with Table 14 below and per Order No. R3-2005-0003, *Biosolids Requirements*, and reported in an annual report as detailed below:

TABLE 13
Minimum Biosolids Monitoring²

Parameter	Units	Sample Type	Min. Analysis Frequency
Quantity	Tons (or yd^3)	Measured	During Removal & Disposal
Moisture	%	Composite Sample	Annually
pН	pH Units	Composite Sample	Annually
Total Kjeldahl nitrogen	mg/kg ¹	Composite Sample	Annually
Ammonia (as N)	mg/kg ¹	Composite Sample	Annually
Nitrate (as N)	mg/kg ¹	Composite Sample	Annually
Total Phosphorus	mg/kg ¹	Composite Sample	Annually
Grease & Oil	mg/kg ¹	Composite Sample	Annually
Potassium	mg/kg ¹	Composite Sample	Annually
Arsenic	mg/kg ¹	Composite Sample	Annually
Boron	mg/kg ¹	Composite Sample	Annually
Cadmium	mg/kg ¹	Composite Sample	Annually
Copper	mg/kg ¹	Composite Sample	Annually
Chromium	mg/kg ¹	Composite Sample	Annually
Lead	mg/kg ¹	Composite Sample	Annually
Molybdenum	mg/kg ¹	Composite Sample	Annually
Mercury	mg/kg ¹	Composite Sample	Annually
Nickel	mg/kg ¹	Composite Sample	Annually
Selenium	mg/kg ¹	Composite Sample	Annually
Silver	mg/kg ¹	Composite Sample	Annually
Zinc	mg/kg ¹	Composite Sample	Annually
Organic toxic pollutants	mg/kg ¹	Composite Sample	Annually

1 Dry weight

Annual biosolids samples shall be collected unless the biosolids volumes generated dictate that more frequent sampling is required. See Order No. R3-2005-0003, *Biosolids Requirements*, Item F.13.a for guidance regarding sampling frequency. If annual sampling is appropriate, samples shall be collected according to the following schedule: November 2005, October 2006, September 2007, August 2008, and July 2009.

The following information, and that required in Order No. R3-2005-0003, *Biosolids Requirements*, shall be submitted in a biosolids annual report due **no later than February 19 each year**. The submittal of the report may, at the Discharger's discretion, be incorporated into the annual report.

- Annual biosolids production in dry tons and percent solids.
- A schematic diagram showing biosolids handling facilities and a solids flow diagram.
- A narrative description of biosolids dewatering and other treatment processes, including process parameters.
- A description of disposal methods, including the following information related to the disposal methods used at the facility. If more than one method is used, include the percentage of annual biosolids production disposed by each method.
 - ► For landfill disposal, include: 1) the Regional Board's Waste Discharge Requirements Order numbers that regulate the landfills used (including those in other regions which may receive biosolids from your facility); 2) the current classifications of the landfills used, and; 3) the names and locations of the facilities receiving biosolids.

► For land application, include: 1) the location of the site(s); 2) the Regional Board's Waste Discharge Requirements Order numbers that regulate the site(s) (including those in other regions which may receive biosolids from your facility); 3) the application rate in lbs/acre/year (specify wet or dry), and; 4) subsequent uses of the land.

IX. INFLOW/INFILTRATION AND SPILL PREVENTION PROGRAM REPORTING

The Discharger shall submit reports in accordance with Order No. R3-2005-0003, Section D, Collection System Requirements, **Inflow/Infiltration and Spill Prevention Program**.

X. PRETREATMENT PROGRAM REPORTING

The Discharger shall submit reports in accordance with Order No. R3-2005-0003, Pretreatment Reporting.

XI. COLLECTION SYSTEM SPILL/OVERFLOW RECORDKEEPING REQUIREMENTS

- 1. The Discharger shall retain applicable records of all overflows, including, but not limited to:
 - a. All original strip chart recordings for continuous monitoring instrumentation;
 - b. Service call records and complaint logs of calls received by the Permittee;
 - c. Spill calls;
 - d. Spill records;
 - e. Copies of all reports required by this Order;
 - f. The location of the sewage overflow and respective receiving waters, if any (nearest street address and Global Positioning System (GPS) coordinates);
 - g. An estimate of the volume of the overflow;
 - h. A description of the sewer system component from which the release occurred;
 - i. The estimated date and time when the overflow began, when it stopped, and when the cleanup was completed:
 - j. The cause or suspected cause of the overflow;
 - k. Steps that have been and will be taken to prevent the overflow from recurring, and a schedule to implement those steps;
 - 1. Documentation from the previous three years which are associated with responses and investigations of system problems related to sanitary sewer overflows at the overflow location;
 - m. A list and description of complaints from customers or others from the previous three years; and
 - n. Documentation of performance and implementation measures for the previous three years.
- 2. If sampling and monitoring are conducted of any overflow, records of monitoring information shall include:
 - a. The date, exact place, and time of sampling or measurements;
 - b. The individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses performed;
 - d. The individual(s) who performed the analyses;
 - e. The laboratory that conducted the analyses;
 - f. The analytical technique or method used; and,
 - g. The results of such analysis.
- 3. If samples are collected, monitoring results must be reported on discharge monitoring report forms approved by the Executive Officer.
- 4. The Discharger shall maintain records for at least five years.
- 5. All monitoring instruments and devices that are used by the Permittee to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

XII. COLLECTION SYSTEM SPILL/OVERFLOW REPORTING

Reporting to the Regional Board

- 1. Per the Regional Board's July 26, 1995 Sewage Spill Reporting Policy, as amended, sewage spills greater than 1,000 gallons and/or all sewage spills that enter a waterbody of the State, or occur where public contact is likely, regardless of the size, shall be reported to the Regional Board by telephone as soon as notification is possible and can be provided without substantially impeding cleanup or other emergency measures, and no later than 24 hours from the time that the Permittee has knowledge of the overflow. The same report shall be provided to the Monterey Bay National Marine Sanctuary.
- 2. Unless fully contained, overflows to storm drains tributary to Waters of the United States shall be reported as discharges to surface waters.
- 3. A written report of all relevant information shall be submitted to the Regional Board within five days of the spill, and shall include no less information than is required on the current spill reporting form (see MRP Attachment 2), or equivalent, as approved by the Regional Board Executive Officer. Attachments to the report should be used as appropriate, and incidents requiring more time than the five-day period must be followed by periodic written status reports until issue closure. Photographs taken during the overflow incident and cleanup shall be submitted to the Regional Board in hard copy and electronic format. The same report shall be provided to the Monterey Bay National Marine Sanctuary.
- 4. The Discharger shall sample all significant spills to surface waters to determine their effects on surface waters and submit the data to the Executive Officer within 30 days. Samples shall, at minimum, be analyzed for total and fecal coliform bacteria and enterococcus bacteria for spills to marine water, and fecal coliform bacteria for spills to freshwater.
- 5. All spills including private lateral spills that the City has knowledge of shall be reported to the Regional Board in writing and electronically (Excel spreadsheet preferred) within 30 days. Such reports shall include, at a minimum, a tabular summary of spill dates, locations, volumes, whether the spill discharged to surface waters (including conveyances thereto) or land, whether cleanup and/or disinfection was performed, the spill's cause, the number of spills at the location in the last three years, and weather conditions. The same report shall be provided to the Monterey Bay National Marine Sanctuary.

This policy is subject to revision by the Executive Officer.

Contact Information:

Central Coast Regional Water Quality Control Board 895 Aerovista Place, Suite 101 San Luis Obispo, CA 93401-5411 Ph: (805) 549-3147

FAX: (805) 549-0397

Monterey Bay National Marine Sanctuary ATTN: Resource Protection Coordinator 299 Foam Street Monterey, CA 93940

Ph: (831) 420-1670 FAX: (831) 420-1654

Reporting to the Governor's Office of Emergency Services

Per the Governor's Office of Emergency Services (OES) 2002 Fact Sheet regarding the reporting of sewage releases (as revised or updated), the California Water Code, commencing with Section 13271, requires that a discharge of sewage into or onto State waters must be reported to OES.

To report sewage releases of 1,000 gallons or more (currently the federal reportable quantity) to OES, <u>orally</u> notify the OES Warning Center at:

(800) 852-7550, or (916) 845-8911.

The reportable quantity is subject to revision by the State of California. OES reporting requirements for sewage releases and hazardous materials can be located on the OES Website @ www.oes.ca.gov in the California Hazardous Material Spill/Release Notification Guidance. The OES Hazardous Materials Unit staff is available for questions at (916) 845-8741.

OES Reporting Exceptions: Notification to OES of an unauthorized discharge of sewage or hazardous substances is not required if: 1) the discharge to State waters is a result of a cleanup or emergency response by a public agency; 2) the discharge occurs on land only and does not affect State waters; or 3) the discharge is in compliance with applicable waste discharge requirements. These exceptions apply only to the Discharger's responsibility to report to OES, and *do not alter the Regional Board's reporting policies or waste discharge requirements*.

XIII. REPORT OF WASTE DISCHARGE (PERMIT RENEWAL) MONITORING

Order No. R3-2005-0003 will expire on May 13, 2010. Effluent critical life stage bioassay testing shall be conducted in 2009 and the results included in the required Report of Waste Discharge **due no later than November 13, 2009**.

XIV. BRINE DISPOSAL

Brine discharges from drinking water treatment operations, if any, to the treatment plant for disposal shall be reported monthly. The report shall include, but not be limited to, the date of the discharge to the treatment facility, the volume, the source of the brine wastewater, hauler identification, available water quality data for brine entering the treatment system, and notification as to whether any effluent sampling was conducted during brine discharge, and what analysis was performed. The annual summary report shall also include the results of sampling/analysis for waste brine hauled, including the monthly volumes disposed.

XV. REPORTING SCHEDULE

The annual summary report (specified in Standard Provision C.16) shall include a summary of lift station and collection system overflows, their causes, corrective actions taken, and corrective actions planned.

Monthly monitoring reports shall be submitted to the Regional Board no later than the first day of the second month following the month of sampling (see Table 15 below). The Discharger shall arrange data in tabular form so the date, the constituents, the concentrations, and all other required analytical data are readily discernible. The data shall be summarized to demonstrate the compliance status with Waste Discharge Requirements Order No. R3-2005-0003.

Receiving water monitoring components specified in Table 9 above shall be reported in a single CCLEAN Annual Report which summarizes findings for all participants. 30-foot depth contour pathogen-indicator monitoring specified in Table 8 above shall be reported monthly by the Discharger, as well as in the CCLEAN Annual Report.

Any noncompliance that may endanger health or the environment shall be reported in accordance with Standard Provision C.4.

TABLE 14 Reporting Schedule

Monitoring Frequency	Reporting Period	Report Due
Continuous, Daily, Weekly, or Monthly	All	No later than the first day of the second month following the month of sampling (e.g., reports for sampling conducted in January are due no later than March 1)
Quarterly	January – March	May 1
	April – June	August 1
	July – September	November 1
	October – December	February 1
Semiannually	January – June	August 1
	July – December	February 1
Annually	January – December	February 1
Annually (for Biosolids Report)		February 19

In reporting "priority pollutants" or Ocean Plan Table B toxic materials, the constituents must be listed in the same order as listed in the Effluent Monitoring Section of this Monitoring and Reporting Program.

Data must be submitted for comparison with each applicable effluent limitation for a given constituent (e.g., effluent concentration limit, effluent mass emission rate, daily maximum, monthly average, etc).

All data shall be submitted to the Board in both hard copy and electronic format. The electronic data submission shall conform to criteria approved by the Central Coast Regional Water Quality Control Board Executive Officer.

ORDERED B	Y:	
	Roger W. Briggs	
	Executive Officer	
	Date	

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