Alan C. Lloyd, Ph.D.
Agency Secretary

California Regional Water Quality Control Board

Central Coast Region

895 Aerovista Place, Suite 101, San Luis Obispo, California 93401
(805) 549-3147 • Fax (805) 543-0397
www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2006-0019
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NO. CA0047881

The following Dischargers are authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	City of Morro Bay and Cayucos Sanitary District
Name of Facility	Morro Bay/Cayucos Wastewater Treatment Plant (WWTP)
Facility Address	160 Atascadero Road Morro Bay, California San Luis Obispo County

The Dischargers are authorized to discharge from the following discharge points as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Municipal Wastewater	35°, 23', 11" N	120°, 52', 29" W	Pacific Ocean

This Order was adopted by the Central Coast Water Board on:	March 24, 2006
This Order shall become effective on:	U.S. EPA Issuance Date + 33 days
This Order shall expire on:	Effective Date + 5 years
The U.S. Environmental Protection Agency (U.S. EPA) and the Central Coast Water Board have classified this discharge as a major discharge.	
The Dischargers shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, by August 10, 2010, as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that Order No. 98-15 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements in this Order.

This certifies that the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on March 24, 2006, and of an NPDES permit issued by the U.S. Environmental Protection Agency, Region IX, on_____.

Roger W. Briggs
Executive Officer, Central Coast Region
California Regional Water Quality Control Board

Alexis Strauss
Director, Water Division, Region IX
U.S. Environmental Protection Agency

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

ORDER NO. R3-2006-0019
NPDES PERMIT NO. CA0047881

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I. FACILITY INFORMATION

The following Dischargers are authorized to discharge in accordance with the conditions set forth in this Order:

Dischargers	City of Morro Bay and Cayucos Sanitary District
Name of Facility	Morro Bay/Cayucos WWTP
Facility Address	160 Atascadero Road
	Morro Bay, California 93442
	San Luis Obispo County
Facility Contact, Title, and Phone	Bruce Keogh, Wastewater Division Manager, (805) 772-6272
Mailing Address	595 Harbor Street, Morro Bay, California 93442
Type of Facility	Municipal WWTP
Facility Design Flow	Annual average of 2.06 million gallons per day (MGD), Peak seasonal dry weather flow of 2.36 MGD

II. FINDINGS

The California **Regional Water Quality Control Board, Central Coast Region** (hereinafter Central Coast Water Board), finds:

A. **Background.** The City of Morro Bay and Cayucos Sanitary District (hereinafter Dischargers) are currently discharging under Order No. 98-15 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0047881. A National Pollutant Discharge Elimination System (NPDES) permit modifying secondary treatment requirements was originally issued to the Dischargers by U.S. EPA and the Central Coast Water Board on March 29, 1985 (NPDES Permit No. CA0047881). The permit was reissued on March 8, 1993 and December 11, 1998. The permit expired March 1, 2004, but continues in force until the effective date of the new permit, in accordance with 40 CFR Part 122.6. The Dischargers applied for reissuance of their 301(h)-modified permit on July 7, 2003. The Dischargers' application requests renewal of the following effluent limitations:

	Monthly Average	**Maximum**
Biochemical Oxygen Demand (mg/L)	120	180
Suspended Solids (mg/L)	70	105

These effluent limitations are based on the Morro Bay/Cayucos WWTP design specifications for combined primary and secondary effluent quality under a peak seasonal dry weather flow of 2.36 million gallons per day (MGD).

U.S. EPA summarized its evaluation of the Dischargers' 301(h) application and drafted a tentative decision, which was signed on November 10, 2005, to grant the Dischargers' request for reissuance of its 301(h) modified NPDES permit.

B. **Facility Description.** The Facility provides treatment by a split-stream process of physical and biological treatment. All wastewater flows through primary sedimentation basins. Up to 1.0 million gallons per day (MGD) is then diverted through secondary treatment facilities including trickling filter, solids-contact, and secondary clarification. Secondary-treated wastewater is then blended with primary-treated wastewater and disinfected by chlorination, then dechlorinated prior to discharge to the Pacific Ocean. Biosolids are anaerobically digested and dried, and then used as a soil conditioner. The treatment plant has the following design capacities:

Average Dry Weather Flow:	2.06 MGD
Peak Seasonal Dry Weather Flow:	2.36 MGD
Maximum Wet Weather Flow:	6.64 MGD

A diagram of the treatment process is depicted on Attachment C, included as part of this permit.

Treated municipal wastewater is discharged to the Pacific Ocean through a 4400-foot (1340 m) outfall/diffuser system. The outfall terminates in the Pacific Ocean (35°23'11"N Latitude, 120°52'29"W Longitude) in approximately 50 feet (15 m) of water. The outfall location is shown in Attachment A. The diffuser was modeled to achieve a minimum initial dilution of 133 parts

seawater for every part effluent. Alternative locations and methods of disposal or recycling, including land-based alternatives, were considered during planning under the Clean Water Grants Program.

C. **Legal Authorities.** The requirements contained in this Order are based on the Basin Plan, Ocean Plan, other federal and state plans and policies, current plant performance, and best professional judgment. Effluent limitations in this Order and Permit are based on California Ocean Plan numerical objectives. U.S. EPA Water Quality Criteria (Acute and Chronic toxicity and Consumption of Marine Fish) were calculated using a minimum dilution ratio of 133:1 (i.e., 133 parts seawater to one part effluent).

D. **Ocean Plan**. The State Water Resources Control Board (State Board) most recently adopted the *Water Quality Control Plan, Ocean Waters of California* (California Ocean Plan) on December 3, 2001. The Ocean Plan contains objectives and requirements governing discharges to the Pacific Ocean.

E. **Basin Plan**. The *Water Quality Control Plan, Central Coastal Basin* (Basin Plan), was adopted by the Board and approved on September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of the Pacific Ocean.

F. **Beneficial Uses**. Existing and anticipated beneficial uses in the vicinity of the discharge include:

a. Water contact recreation;
b. Non-contact water recreation;
c. Industrial water supply;
d. Navigation;
e. Marine habitat;
f. Shellfish harvesting;
g. Commercial and sport fishing;
h. Rare, threatened or endangered species;
i. Wildlife habitat.

G. **401 Certification**. Central Coast Water Board adoption of this Order constitutes certification and concurrence under Title 40, Code of Federal Regulation (40 CFR) Part 124.54, that the discharge, as described in the Dischargers' 301(h) application, will comply with applicable state laws, including water quality standards, and will not result in additional treatment, pollution control, or other requirements on any other point or nonpoint source. Conversely, Central Coast Water Board denial of this Order constitutes denial of certification. According to Clean Water Act Section 401(a)(1), U.S. EPA may not issue the NPDES permit until the Central Coast Water Board grants certification.

H. **National Marine Fisheries Certification**. The Dischargers provided certification in a letter from the National Marine Fisheries Service (NMFS) dated August 12, 2003, that the proposed 301(h) discharge is not expected to impact local critical habitats and/or endangered species under its jurisdiction.

I. **Major Discharge**. The Central Coast Water Board and U.S. EPA classify the discharge as a major discharge (>1.0 MGD). According to 40 CFR 125.58(c), the Dischargers are defined as a small applicant for 301(h) modified permit (<5 MGD).

J. **Pretreatment**. The Dischargers are exempt from applicable pretreatment requirements specified under 40 CFR 125.66(d). In accordance with requirements specified in this Order and Permit, the Dischargers shall implement public education and waste minimization/source reduction programs to limit the introduction of toxic pollutants and pesticides into the treatment plant. Implementation of 'Pollution Prevention Program' will substitute for those requirements specified under 40 CFR 125.66 (d) (Nonindustrial Source Control Program).

K. **Monitoring and Reporting.** A Monitoring and Reporting Program (MRP) is a part of this Order (see Attachment E). The MRP requires routine monitoring of influent, effluent, receiving water, benthic sediment, benthic organisms, outfall/diffuser condition, and biosolids. The MRP meets the requirements of 40 CFR Part 125.57 for 301(h) modified permits. The MRP 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 items and conditions; and c) assess the effectiveness of industrial pretreatment and toxics control programs.

L. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR §§122.41 and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Central Coast Water Board has also included in this Order special provisions applicable to the Dischargers. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

M. **California Environmental Quality Act (CEQA).** Reissuance of waste discharge requirements for this discharge is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Division 13, Chapter 3, Section 2100, et seq.) in accordance with Section 13389 of the California Water Code. These waste discharge requirements permit no expansion of use beyond the prior Permit, and issuance of 401 Certification is exempt in accordance with CEQA Guidelines 15301.

N. A permit and the privilege to discharge waste into waters of the State are conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or as supplemented by implementing guidelines and regulations), and with any more stringent effluent limitations necessary to implement water quality control plans, to protect beneficial uses, and to prevent nuisance. This order and permit shall serve as a National Pollutant Discharge Elimination System (NPDES) permit pursuant to section 402 of the Clean Water Act or amendments thereto, and as waste discharge requirements pursuant to the California Water Code. Compliance with this order and permit should ensure conditions are met and mitigate any potential changes in water quality due to the project.

O. **Anti-Degradation.** The discharge authorized in this permit is expected to maintain receiving water quality and associated beneficial uses of the receiving waters. Discharge in accordance with limitations and specifications of this permit is not expected to degrade water quality. Accordingly,

this permit is consistent with the requirements of State Water Resources Control Board Resolution No. 68-16 (commonly called the *Anti-Degradation Policy*).

P. **Anti-Backsliding**. 40 CFR Section 122.44(l) requires effluent limitations for reissued NPDES permits be at least as stringent as the previous permit, unless certain grounds for "backsliding" apply. All effluent limitations in the proposed Order are at least as stringent as the previous permit and comply with Anti-Backsliding provisions.

Q. **Mandatory Penalties**. Section 13385(h) et seq. of the California Water Code requires the Central Coast Water Board to impose mandatory penalties for certain effluent limit violations. Section 13385(h) et seq. applies to effluent discharged to the ocean from these Dischargers.

R. **Water Code Section 13241.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal Clean Water Act. Individual pollutant restrictions consist of technology-based restrictions and water quality-based effluent limitations. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives contained in the Ocean Plan were approved under state law and submitted to and approved by U.S. EPA. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA before May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA before May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 C.F.R. 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the Clean Water Act and the applicable water quality standards for purposes of the Clean Water Act. This Order also includes Wastewater Collection System Requirements to implement the Clean Water Act and State law. The Dischargers have not submitted economic information regarding the cost of complying with this those requirements. Other dischargers within the Central Coast Region have successfully implemented similar requirements. The collection system requirements are reasonably necessary to protect beneficial uses identified in the Basin Plan, and there is no economic information related to costs of compliance sufficient, in the Board's determination, to justify failing to protect beneficial uses.

S. **Facility Upgrade.** The Dischargers have agreed to upgrade the Facility to full secondary treatment standards pursuant to a Settlement Agreement with the Central Coast Water Board. The Settlement Agreement provides for a nine and one-half year Conversion Schedule. Subject to the provisions of the Settlement Agreement regarding force majeure, the Conversion Schedule is as follows:

CONVERSION SCHEDULE

Task	Date of Completion
Preliminary Activities:	
1. Morro Bay/ Cayucos Negotiations for Shared Facility Plan and Cost Allocation	April 1, 2006
2. Issuance of Request for Consulting Engineering Proposals for Facilities Master Plan	October 3, 2006
3. Award of Consulting Engineering Contracts	December 22, 2006
Facilities Planning:	
1. Submit Final Draft Facilities Plan	September 18, 2008
2. Submit Final Facilities Plan	July 22, 2010
Environmental Review and Permitting:	
1. Complete and Circulate Draft CEQA Document	December 18, 2009
2. Certification of Final CEQA Document	October 18, 2010
3. Submit proof of application for all necessary permits	March 17, 2011
4. Obtain all necessary permits	March 19, 2012
Financing:	
1. Complete Draft Plan for Project Design and Construction Financing	October 22, 2008
2. Complete Final Plan for Project Financing	April 20, 2009
3. Submit proof that all necessary financing has been secured, including compliance with Proposition 218	August 20, 2010
Design and Construction:	
1. Initiate Design	April 19, 2011
2. 30 Percent Design	February 7, 2012
3. 60 Percent Design	May 7, 2012
4. 90 Percent Design	July 16, 2012
5. 100 Percent Design	October 19, 2012
6. Issue Notice to Proceed with Construction	January 23, 2013
7. Construction Progress Reports	Quarterly (w/ SMRs)
8. Complete Construction and Commence Debugging and Startup	April 22, 2015
9. Achieve Full Compliance with Secondary Treatment Requirements	June 23, 2015

Attachment F includes additional information about the facility upgrade. The requirements of the Settlement Agreement are enforceable as set forth in the Settlement Agreement. The Central Coast Water Board and EPA have considered the Settlement Agreement in adopting this Order, but the upgrade requirements are not terms of the Permit. Subject to the provisions of the Agreement regarding Water Board Discretion and New Evidence, the Settlement Agreement contemplates that the Water Board will concur in the issuance of this modified discharge permit and issue an NPDES Permit in order to effect the Settlement Agreement and the Dischargers' obligation to complete the upgrade of its treatment facility to full secondary treatment standards within a nine-and-one-half-year period. Based on the administrative record, including population growth projections through 2015, known environmental and cumulative impacts of the Dischargers' existing wastewater treatment facilities, and evidence submitted by the Dischargers of the time needed for upgrading the

plant, the Conversion Schedule is reasonable, necessary and appropriate. The Central Coast Water Board has also considered the need to develop recycled water. A need to develop and use recycled water exists within the region. The nine and one-half year upgrade schedule allows time for the Dischargers to consider technical and funding options for installing tertiary treatment to address recycled water needs. Allowing time in the Conversion Schedule for the Dischargers to investigate these options increases the likelihood that the Dischargers will voluntarily install tertiary treatment facilities.

T. **Notification of Interested Parties**. On December 19, 2005, U.S. EPA Region IX and the Central Coast Water Board notified the Dischargers and other interested agencies and persons of their intent to renew waste discharge requirements for this discharge and incorporate modifications to the secondary treatment limitations, and have provided these interested parties with an opportunity to submit their written views and recommendations.

U. **Consideration of Public Comment**. In a public hearing on February 10, 2006, U.S. EPA Region IX and the Central Coast Water Board heard and considered all comments pertaining to the discharge and found this Order and Permit consistent with the above findings. Details of the public hearing are provided in the Fact Sheet (Attachment F) of this Order.

V. **Right to Petition**. Any person affected by this action of the Central Coast Water Board may petition the State Board to review the action in accordance with Section 13320 of the California Water Code and Title 23, California Code of Regulations, Section 2050. The petition must be received by the State Board within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.

III. DISCHARGE PROHIBITIONS

A. The discharge of treated wastewater at a location other than 35°23'11"N Latitude, 120°52'29"W Longitude, is prohibited.

B. Bypass of the treatment facility and discharge of any wastes not meeting the discharge specifications of this Order and Permit are prohibited.

C. Discharge of any wastes including overflow, bypass and seepage from transport, treatment or disposal systems is prohibited.

D. The discharge of chlorine or any other toxic substance used for disinfection and cleanup of sewage overflows, to any surface water body is prohibited. This prohibition does not apply to the chlorine in the potable water used for final wash down and cleanup of overflows.

IV. EFFLUENT LIMITATIONS[1] AND DISCHARGE SPECIFICATIONS

A. Effluent peak seasonal dry weather flow shall not exceed a monthly average of 2.36 MGD.

B. The Dischargers shall, as a 30-day average, remove at least 75% of Suspended Solids and 30% of BOD_5 from the influent stream before discharging wastewater to the ocean, except that the limit shall not be less than 60 mg/L. In addition, effluent shall not exceed the following limits:

Constituent	Unit of Measurement	Average Monthly	Instantaneous Maximum
BOD_5	mg/L	120	180
	lbs/day	2062	3092
	kg/day	936	1404
Suspended Solids	mg/L	70	105
	lbs/day	1203	1804
	kg/day	546	819

C. Effluent shall not exceed the following limits:

1.

Constituent	**Units**	**Average Monthly**	**Average Weekly**	**Instantaneous Maximum**
Grease and Oil	mg/L	25	40	75
	lbs/day	430	687	1288
	kg/day	195	312	585
Settleable Solids	mL/L	1.0	1.5	3.0
Turbidity	NTU	75	100	225
pH	--	Within limits of 6.0 to 9.0 at all times.		

2. FOR PROTECTION OF MARINE AQUATIC LIFE

Constituent	**Units**	**Six-Month Median**	**Maximum Daily**	**Instantaneous Maximum**
Arsenic	mg/L	0.67	3.89	10.3
Cadmium	mg/L	0.13	0.54	1.34
Chromium(Hex)[2]	mg/L	0.27	1.07	2.68
Copper	mg/L	0.14	1.34	3.75
Lead	mg/L	0.27	1.07	2.68
Mercury	µg/L	5.29	21.4	53.5
Nickel	mg/L	0.67	2.68	6.70
Selenium	mg/L	2.01	8.04	20.1

[1] Based on Ocean Plan criteria using a calculated minimum initial dilution of 133:1. If actual dilution is found to be less than 133:1, these values will be recalculated.

[2] The Dischargers may at its option meet this limitation as a Total Chromium limitation.

Constituent	Units	Six-Month Median	Maximum Daily	Instantaneous Maximum
Silver	mg/L	0.07	0.35	0.92
Zinc	mg/L	1.62	9.66	25.7
Cyanide[3]	mg/L	0.13	0.54	1.34
Total Chlorine Residual	mg/L	0.27	1.07	8.04
Ammonia (as N)	mg/L	80.4	322	804
Acute Toxicity	TUa	--	4.3	--
Chronic Toxicity[4]	TUc	--	134	--
Phenolic Compounds (non-chlorinated)	mg/L	4.02	16.1	40.2
Chlorinated Phenolics	mg/L	0.13	0.54	1.34
Endosulfan[5]	µg/L	1.21	2.41	3.62
Endrin	µg/L	0.27	0.54	0.80
HCH[6]	µg/L	0.54	1.07	1.61
Radioactivity	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations.			

3. FOR PROTECTION OF HUMAN HEALTH, NON-CARCINOGENS

Constituent	Units	Average Monthly
acrolein	mg/L	29.5
antimony	mg/L	160.8
bis(2-chloroethoxy) methane	mg/L	0.59
bis(2-chloroisopropyl) ether	mg/L	160.8
chlorobenzene	mg/L	76.4
chromium (III)[7]	g/L	25.5
di-n-butyl phthalate	mg/L	469
dichlorobenzenes[8]	mg/L	683
diethyl phthalate	mg/L	4420
dimethyl phthalate	g/L	109.9
4,6-dinitro-2-methylphenol	mg/L	29.5

3 If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR PART 136, as revised May 14, 1999

[4] Chronic Toxicity Units (TUc): TUc = 100/NOEL (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 listed in Appendix III of the 2001 California Ocean Plan.

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

[6] HCH means the sum of the alpha, beta, gamma (lindane), and delta isomers of hexachlorocyclohexane.

[7] Dischargers may at their option meet this objective as a total chromium objective.

[8] Sum of 1,2- and 1,3-dichlorobenzene.

Constituent	Units	Average Monthly
2,4-dinitrophenol	mg/L	0.54
ethylbenzene	mg/L	549
fluoranthene	mg/L	2.0
hexachlorocyclopentadiene	mg/L	7.8
nitrobenzene	mg/L	0.66
thallium	mg/L	0.27
toluene	g/L	11.4
tributyltin	µg/L	0.188
1,1,1-trichloroethane	g/L	72.4

4. FOR PROTECTION OF HUMAN HEALTH, CARCINOGENS

Constituent	Units	Average Monthly
acrylonitrile	µg/L	13.4
aldrin	ng/L	2.95
benzene	µg/L	791
benzidine	ng/L	9.25
beryllium	µg/L	4.42
bis(2-chloroe-thyl) ether	µg/L	6.03
bis(2-ethylhexyl) phthalate	µg/L	469
carbon tetrachloride	µg/L	121
chlordane[9]	ng/L	3.08
chlorodibromomethane	µg/L	1152
chloroform	mg/L	17.4
DDT[10]	ng/L	22.8
1,4-dichlorobenzene	mg/L	2.41
3,3-dichlorobenzidine	µg/L	1.09
1,2-dichloroethane	mg/L	3.75
1,1-dichloroethylene	mg/L	0.12
dichlorobromomethane	mg/L	0.83
dichloromethane	mg/L	60.3
1,3-dichloropropene	mg/L	1.19
dieldrin	ng/L	5.36
2,4-dinitrotoluene	µg/L	348
1,2-diphenylhydrazine	µg/L	21.4
halomethanes[11]	mg/L	17.4
heptachlor	pg/L	6.7
heptachlor epoxide	pg/L	2.68
hexachlorobenzene	ng/L	28.1
hexachlorobutadiene	mg/L	1.88

[9] Sum of chlorodane-alpha, chlorodane-gamma, chlorodene-alpha, chlorodene-gamma, nonachlor-alpha and oxychlorodane.
[10] Sum of 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'-DDE, 4,4'-DDD, and 2,4'-DDD.
[11] Sum of bromoform, bromoethane (methylbromide), chloro-methane (methyl chloride), chlorodibromomethane and dichlorobromo-methane.

Constituent	Units	Average Monthly
hexachloroethane	µg/L	335
isophorone	mg/L	98
N-nitrosodimethylamine	µg/L	978
N-nitrosodi-N-propylamine	µg/L	50.9
N-nitrosodiphenylamine	µg/L	335
PAHs[12]	µg/L	1.18
PCBs[13]	ng/L	2.55
TCDD equivalents[14]	pg/L	0.52
1,1,2,2-tetrachloroethane	mg/L	0.31
tetrachloroethylene	µg/L	268
toxaphene	ng/L	28.1
trichloroethylene	mg/L	3.62
1,1,2-trichloroethane	mg/L	1.26
2,4,6-trichlorophenol	mg/L	0.039
vinyl chloride	mg/L	4.82

5. The effluent mass emission rate shall not exceed the *Maximum Allowable Mass Emission Rate*, as described in the Standard Provisions and Reporting Requirements[15].

6. Violations of the *Instantaneous Maximum* or *Maximum Allowable Daily Mass Emission Rate* must be reported to the Central Coast Water Board within 24-hours.

D. Total coliform bacteria in effluent shall not exceed a 30-day median of 23 MPN/100 mL and a maximum of 2400 MPN/100 mL.

E. Effluent must be essentially free of:

1. Material that is floatable or will become floatable upon discharge.

[12] Sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,1,2- benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]- anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenan-threne and pyrene.

[13] 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		

[15] Daily mass emission calculations shall be based on the average design flow rate of 2.06 million gallons per day (MGD).

2. Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.
3. Substances that will accumulate to toxic levels in marine waters, sediments or biota.
4. Substances that significantly decrease the natural light to benthic communities.
5. Materials that result in aesthetically undesirable discoloration of the ocean surface.

V. RECEIVING WATER LIMITATIONS

Bacterial Characteristics

A. Wastewater constituents within the discharge shall not cause the following bacterial objectives to be exceeded throughout the water column within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the Central Coast Water Board, but including all kelp beds:

Parameter	Total Coliform Organisms (MPN/100 mL)	Fecal Coliform Organisms (MPN/100 mL)
Log Mean (30-day period)	--	200
90% of samples (60-day period)	--	400
80% of samples (60-day period)	1,000	--
Maximum[1]	10,000	--

B. Wastewater constituents within the discharge shall not cause the following bacterial limits to be exceeded in the water column at all areas where shellfish may be harvested for human consumption, as determined by the Central Coast Water Board.

Parameter Applicable to any 30-day period	Total Coliform Organisms (MPN/100 mL)
Median	70
90% of samples	230

C. Dischargers shall conduct a bacterial assessment to identify the source(s), if Receiving Water Limitations A or B are consistently exceeded or the following enterococcus densities are exceeded:

Parameter	Enterococcus Organisms (MPN/100 mL)
Log Mean[2] (30-day)	24
Log Mean (6 month)	12

Physical Characteristics

D. Wastewater constituents within the discharge shall not cause floating particles and oil and grease to be visible on the ocean surface.

E. Wastewater constituents within the discharge shall not cause aesthetically undesirable discoloration of the ocean surface.

F. Wastewater constituents within the discharge shall not cause significant reduction in the transmittance of natural light at any point outside the initial dilution zone.

[1] Verified by a repeat sample taken within 48 hours.
[2] Log Mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval.

G. Wastewater constituents within the discharge shall not cause change in the rate of deposition and the characteristics of inert solids in ocean sediments such that benthic communities are degraded.

H. Wastewater constituents within the discharge shall not cause temperature of the receiving water to adversely affect beneficial uses.

Chemical Characteristics

I. Wastewater constituents within the discharge shall not cause the dissolved oxygen concentration outside the zone of initial dilution to fall below 5.0 mg/L or to be depressed more than 10 percent from that which occurs naturally.

J. Wastewater constituents within the discharge shall not cause the pH outside the zone of initial dilution to be depressed below 7.0, raised above 8.3, or changed more than 0.2 units from that which occurs naturally.

K. Wastewater constituents within the discharge shall not cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions.

L. Wastewater constituents within the discharge shall not cause the concentration in marine sediments of substances listed in Table B of the 2001 California Ocean Plan to be increased above levels which would degrade indigenous biota.

M. Wastewater constituents within the discharge shall not cause the concentration of organic materials in marine sediments to increase above levels which would degrade marine life.

N. Wastewater constituents within the discharge shall not cause objectionable aquatic growths or degradation of indigenous biota resulting from the discharge of nutrients.

O. Wastewater constituents within the discharge shall not cause degradation of marine communities, including vertebrate, invertebrate, and plant species.

P. Wastewater constituents within the discharge shall not cause alteration of the natural tastes, odor, and color of fish, shellfish, or other marine resources used for human consumption.

Q. Wastewater constituents within the discharge shall not cause the concentrations of organic materials in fish, shellfish or other marine resources used for human consumption to bioaccumulate to levels that are harmful to human health.

Radioactivity

R. Wastewater constituents within the discharge shall not cause degradation of marine life due to radioactive waste.

VI. PROVISIONS

A. Standard Provisions

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

2. **Central Coast Water Board Standard Provisions.** The Dischargers shall comply with all Central Coast Water Board Standard Provisions included in Attachment D-1 of this Order.

B. Monitoring and Reporting Program Requirements

The Dischargers shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Pretreatment Specifications/Pollution Prevention Program

A Pretreatment Program or Pollution Prevention Program is a regulatory program administered by the Dischargers to prevent the introduction of pollutants into the POTW (publicly owned treatment works) which will interfere with the operation of the treatment works, pass through the treatment facility, reduce opportunities to recycle and reuse municipal wastewater and sludge, or expose the POTW employees to hazardous chemicals. This permit implements pollution prevention requirements specified in 40 CFR Part 125.66(d) in lieu of the General Pretreatment Regulations specified in 40 CFR Part 403.

The Dischargers shall implement an ongoing pollution prevention program (approved by the Central Coast Water Board) to prevent the introduction of incompatible pollutants into the treatment works. At a minimum, the program shall include:

a. Inventory all chemicals used for the operation and maintenance of the treatment plant that may enter the discharge and classify each according to its potential to cause toxicity to be present in the effluent. If toxicity data is not available for the chemicals used at the plant, and toxicity is found to be present in the effluent, the Dischargers should conduct toxicity tests on the individual chemicals that potentially contribute to effluent toxicity.

b. Develop and implement a public educational program targeted at residential and commercial sources of toxic pollutants emphasizing the need to properly manage and minimize the disposal (i.e., source reduction) of potentially harmful pollutants (oil, antifreeze, pesticides, herbicides, paints, solvents, etc.).

c. Develop and implement program(s) which provide convenient means for people to properly dispose of (and/or recycle) oil, antifreeze, pesticides, herbicides, paints, solvents, and other potentially harmful chemicals.

d. Develop and implement waste minimization measures to reduce or eliminate incompatible pollutants discharged to the treatment plant. Waste minimization measures must address all significant controllable sources of pollutants including residential, industrial, and commercial sources.

e. On an annual basis, to be submitted with the annual report specified in the MRP, the Dischargers shall submit a status report to U.S. EPA and Central Coast Water Board detailing efforts of compliance with regard to the 'Pollution Prevention Program' requirements specified herein.

f. In order to provide adequate legal authority for the Dischargers to protect its POTW and to evaluate sources of industrial discharges, the Dischargers must perform the following activities:

1. Develop and implement a sewer use ordinance to provide the legal authorities described in 40 CFR 403.8(f)(1).

2. Update annually (and summarized in the annual report) industrial waste survey as described in 40 CFR 403.8 (f)(2)(i)-(ii).

3. Update annually (and summarized in the annual report) potential impacts of industrial discharges, identified in D.1.f)2. above, upon the POTW. The report must address the need for regulation of industrial discharges to implement the objectives of the pollution prevention program.

4. If, in the evaluation of D.1.f)2. and D.1.f)3. above, the Executive Officer determines that a formal pretreatment program is necessary to adequately meet program objectives, then the Dischargers shall develop such a program in accordance with 40 CFR 403.9.

5. The Dischargers shall comply, and ensure affected indirect Dischargers comply, with Paragraph No. D.1. of Standard Provisions and Reporting Requirements.

2. Biosolids Requirements

Language in this section was provided by the U.S. EPA Region IX Biosolids Coordinator as standard language for use in NPDES permits. "Biosolids" refers to non-hazardous sewage sludge as defined in 40 CFR 503.9. Sewage sludge that is hazardous as defined in 40 CFR 261 must be disposed in accordance with the Resource Conservation and Recovery Act (RCRA). Sludge with PCB levels greater than 50 mg/kg must be disposed in accordance with 40 CFR 761.

a. Management of all solids and sludge must comply with all requirements of 40 CFR Parts 257, 258, 501, and 503, including all monitoring, record-keeping, and reporting requirements. Since the State of California, hence the Regional and State Boards, has not been delegated the authority by the U.S. EPA to implement the biosolids program, enforcement of biosolids requirements of CFR Part 503 will occur under U.S. EPA's jurisdiction at this time.

b. All biosolids generated by the Dischargers shall be used or disposed of in compliance with the applicable portions of:

   i. 40 CFR 503: for biosolids which are land applied (placed on the land for the purpose of providing nutrients or conditioning the soil for crops or vegetation), placed in surface disposal sites (placed on the land at dedicated land disposal sites or monofills for the purpose of disposal), stored, or incinerated;

   ii. 40 CFR 258: for biosolids disposed in municipal solid waste landfills; and,

   iii. 40 CFR 257: for all biosolids use and disposal practices not covered under 40 CFR 258 or 503.

c. 40 CFR 503 Subpart B (land application) applies to biosolids applied for the purpose of enhancing plant growth or for land reclamation. 40 CFR 503 Subpart C (surface disposal) applies to biosolids placed on the land for the purpose of disposal.

d. The Dischargers are responsible for ensuring that all biosolids produced at its facility are used or disposed of in compliance with these regulations, whether the Dischargers use or dispose of the biosolids itself or transfers them to another party for further treatment, use, or disposal. The Dischargers are responsible for informing subsequent preparers, appliers, and disposers of the requirements that they must meet under 40 CFR 257, 258, and 503.

e. Duty to mitigate: The Dischargers shall take all reasonable steps to prevent or minimize any biosolids use or disposal in violation of applicable regulations and/or which has a likelihood of adversely affecting human health or the environment.

f. No biosolids shall be allowed to enter wetlands or other waters of the United States.

g. Biosolids treatment, storage, use, or disposal shall not contaminate groundwater.

h. Biosolids treatment, storage, use, or disposal shall not create a nuisance such as objectionable odors or flies.

i. The Dischargers shall assure that haulers transporting biosolids off site for treatment, storage, use, or disposal take all necessary measures to keep the biosolids contained.

j. If biosolids are stored for over two years from the time they are generated, the Dischargers must ensure compliance with all the requirements for surface disposal under

40 CFR 503 Subpart C, or must submit a written notification to U.S. EPA with the information in Section 503.20(b), demonstrating the need for longer temporary storage.

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

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

m. The Dischargers shall design its pretreatment program local discharge limitations to achieve the metals concentration limits in 40 CFR 503.13 Table 3.

n. Inspection and Entry: The U.S. EPA, Central Coast Water Board, or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Dischargers, directly or through contractual arrangements with their biosolids management contractors, to:

   i. Enter upon all premises where biosolids produced by the Dischargers are treated, stored, used, or disposed, either by the Dischargers or by another party to whom the Dischargers transfers the biosolids for treatment, storage, use, or disposal;

   ii. Have access to and copy any records that must be kept under the conditions of this permit or of 40 CFR 503, by the Dischargers or by another party to whom the Dischargers transfers the biosolids for further treatment, storage, use, or disposal, and;

   iii. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in the biosolids treatment, storage, use, or disposal by the Dischargers or by another party to whom the Dischargers transfers the biosolids for treatment, storage, use, or disposal.

o. Monitoring shall be conducted in accordance with the Monitoring and Reporting Program (MRP) of this Order (see Attachment E):

p. All the requirements of 40 CFR 503 and 23 CCR, Division 3, Chapter 15, and 27 CCR, Division 2 are enforceable by the U.S. EPA and this Central Coast Water Board whether or not the requirements are stated in an NPDES permit or any other permit issued to the Dischargers.

3. Wastewater Collection System Requirements

The requirements of this section, including Attachment G, shall terminate when the Discharger obtains coverage under statewide General Waste Discharge Requirements for Sewage Collection System Agencies.

The burden, including costs, of collection system monitoring and reporting requirements is reasonable in light of the need to ensure that operation and maintenance of the collection system will minimize spills and overflows and the need for the Central Coast Water Board to assure protection of beneficial uses. Evidence supporting these requirements is included in the Fact Sheet, Attachment F, Section III.C.

Wastewater Collection System Management Plan Development and Implementation

a. The Dischargers shall develop and implement a Wastewater Collection System Management Plan (Management Plan) in accordance with the time schedule established in Attachment G, Elements of the Wastewater Collection System Management Plan. The Management Plan shall be available to any member of the public upon written request.

b. Order Attachment G outlines the Management Plan elements for the Dischargers' consideration. The Dischargers' Management Plan shall clearly address and label all Management Plan elements outlined in Attachment G. If any Management Plan element is not appropriate or applicable to Dischargers' collection system, then the Management Plan shall provide the rationale for not including the element.

c. To facilitate continuity between the Dischargers' existing wastewater collection system programs and the development and implementation of the Management Plan, the Management Plan shall incorporate within the appropriate sections, but not be limited to, the Dischargers' existing wastewater collection system programs, and the Wastewater Collection System Overflow Prevention and Response and Infiltration/Inflow and Spill Prevention requirements below. Wherever appropriate, the Dischargers are encouraged to use its existing programs or practices to address the Management Plan elements.

Wastewater Collection System Overflow Prevention and Response

d. The Dischargers shall coordinate with any local wastewater collection system entities discharging to the Dischargers' POTW on all relevant matters concerning the wastewater collection systems, pretreatment programs, and the wastewater treatment facility.

e. The Dischargers are prohibited from discharging chlorine, or any other toxic substance used for disinfection and cleanup of sewage overflows, to any surface water body (Note: This prohibition does not apply to the chlorine already present in the potable water used for final wash down and clean up of overflows.). The Dischargers shall take all reasonable steps to contain and prevent chlorine discharges to surface waters and minimize or correct any adverse impact on the environment resulting from the cleanup of overflows.

f. The Dischargers shall develop a monitoring program to evaluate the effectiveness of overflow cleanup protocols for protecting public health and the environment. Minimum protocols should include visual observation, sample collection, and sampling data analyses. The monitoring program shall be developed in coordination with the Central Coast Water Board and the San Luis Obispo County Environmental Health Department, as appropriate. The Dischargers shall submit a proposed monitoring program for Executive Officer review and approval by **October 1, 2006**.

g. The Dischargers shall make every reasonable effort to prevent sewage overflows from its wastewater collection system and private systems from entering storm drains and/or surface water bodies. The Dischargers shall also make every reasonable effort to prevent sewage and/or chlorine used for disinfection of overflows from discharging from storm drains into flood control channels and open ditches by blocking the storm drainage system and by removing the sewage and/or chlorine from the storm drains.

h. Upon reduction, loss, or failure of the wastewater collection system resulting in a sewage overflow, the Dischargers shall, to the extent necessary to maintain compliance with this Order, take any necessary remedial action to:

    i. Control or limit the volume of sewage discharged;

    ii. Terminate the sewage discharge as rapidly as possible, and;

    iii. Recover as much of the sewage discharged as possible for proper disposal, including any wash-down water.

i. The Dischargers shall implement all remedial actions to the extent they may be applicable to the discharge, including the following:

    i. Interception and rerouting of sewage flows around the sewage line failure;

    ii. Vacuum truck recovery of wastewater collection system overflows and wash down water;

    iii. Cleanup of debris of sewage origin at the overflow site;

    iv. Sample affected receiving water body to ensure adequate clean-up, and;

    v. Submit monitoring data to the Executive Officer within 30 days of sampling.

j. The discharge of untreated or partially treated sewage is prohibited pursuant to Central Coast Water Board Standard Provisions, Prohibition A.4 (Attachment D-1), and shall constitute a violation of these discharge requirements unless the Dischargers demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence that the following criteria are met:

i. The discharge was caused by one or more severe natural conditions, including widespread flooding, earthquakes, tsunamis, and other similar natural conditions, and;

ii. There were no feasible alternatives to the discharge, such as the use of auxiliary treatment facilities, retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, or an increase in the capacity of the system. This provision is not satisfied if, in the exercise of reasonable engineering judgment, the Dischargers should have installed auxiliary or additional collection system components, wastewater retention or treatment facilities, or adequate back-up equipment, or should have reduced inflow and infiltration.

k. In any enforcement action, the Central Coast Water Board will consider the efforts of the Dischargers to contain, control, and clean up sewage overflows from its collection system as part of the Board's consideration of the factors required by Section 13385 of the California Water Code.

Infiltration/Inflow and Spill Prevention Measures

l. The Dischargers shall continue to develop and implement infiltration, inflow, and spill prevention efforts to address problems associated with infiltration (e.g., groundwater entering into the collection system through defective pipe joints or connections to manholes), inflow (e.g., storm water entering manhole covers) and sewage spills (often caused by grease or root blockages). These activities shall be reviewed and updated as necessary by September 1st of every year, and shall be incorporated into the Wastewater Collection System Management Plan as required by this Order, and as outlined in Attachment G.

m. Infiltration, inflow, and spill prevention measures shall be developed in accordance with good engineering practices and shall address the following objectives:

i. Identify infiltration and inflow sources that may affect treatment facility operation or possibly result in overflow or exceed pump station capacity; and,

ii. Identify, assign, and implement spill prevention measures and collection system management practices to ensure overflows and the contribution of pollutants (including illicit contributions) or "incompatible wastes" to the Dischargers' treatment system are minimized.

VII. COMPLIANCE DETERMINATION

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

A. Average Monthly Effluent Limitation (AMEL).
If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Average Weekly Effluent Limitation (AWEL).
If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the discharger will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

C. Maximum Daily Effluent Limitation (MDEL).
If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

D. Instantaneous Minimum Effluent Limitation.
If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

E. Instantaneous Maximum Effluent Limitation.
If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

F. Six-month Median Effluent Limitation.

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

ATTACHMENT A – DEFINITIONS

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

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

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

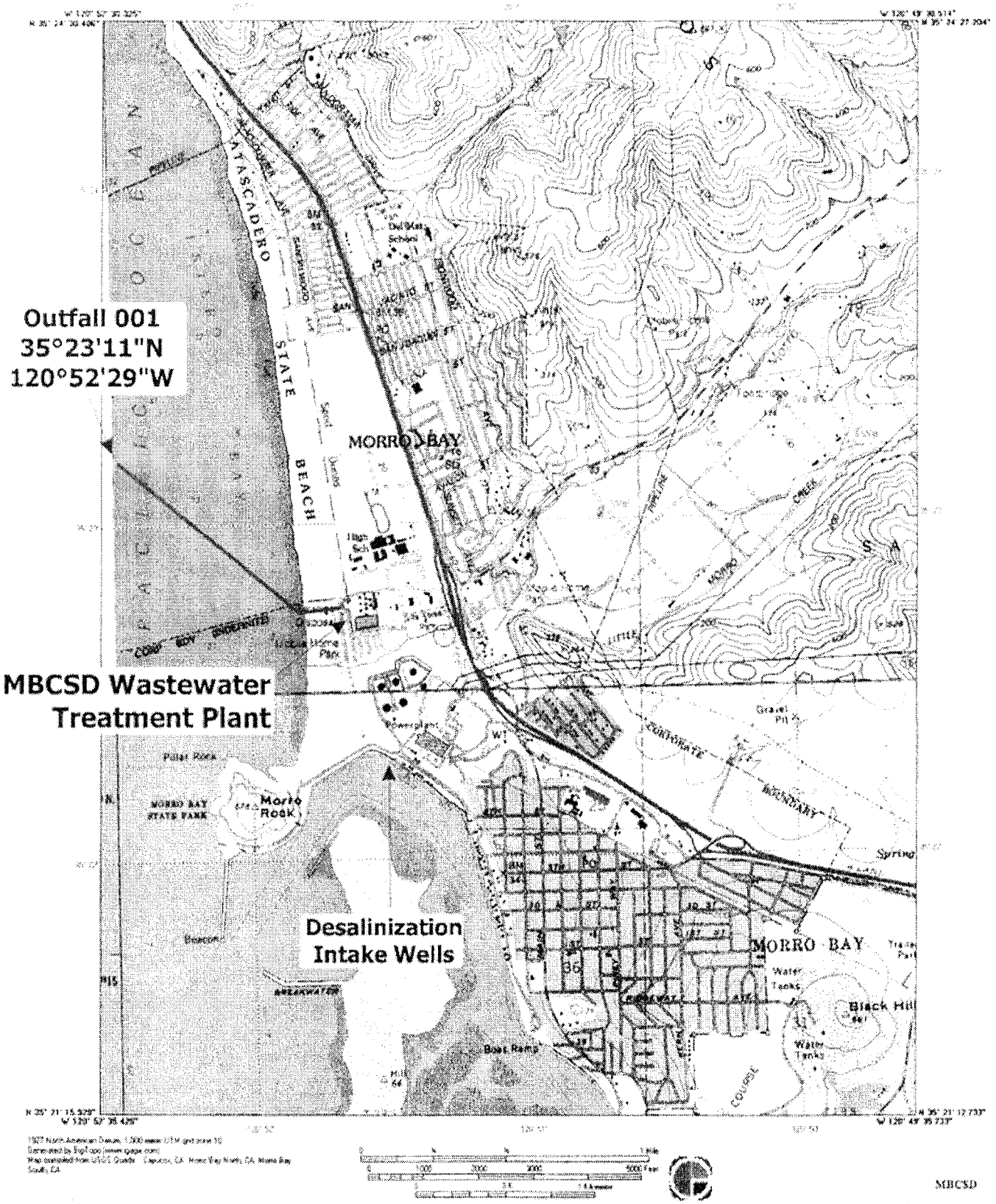
Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

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

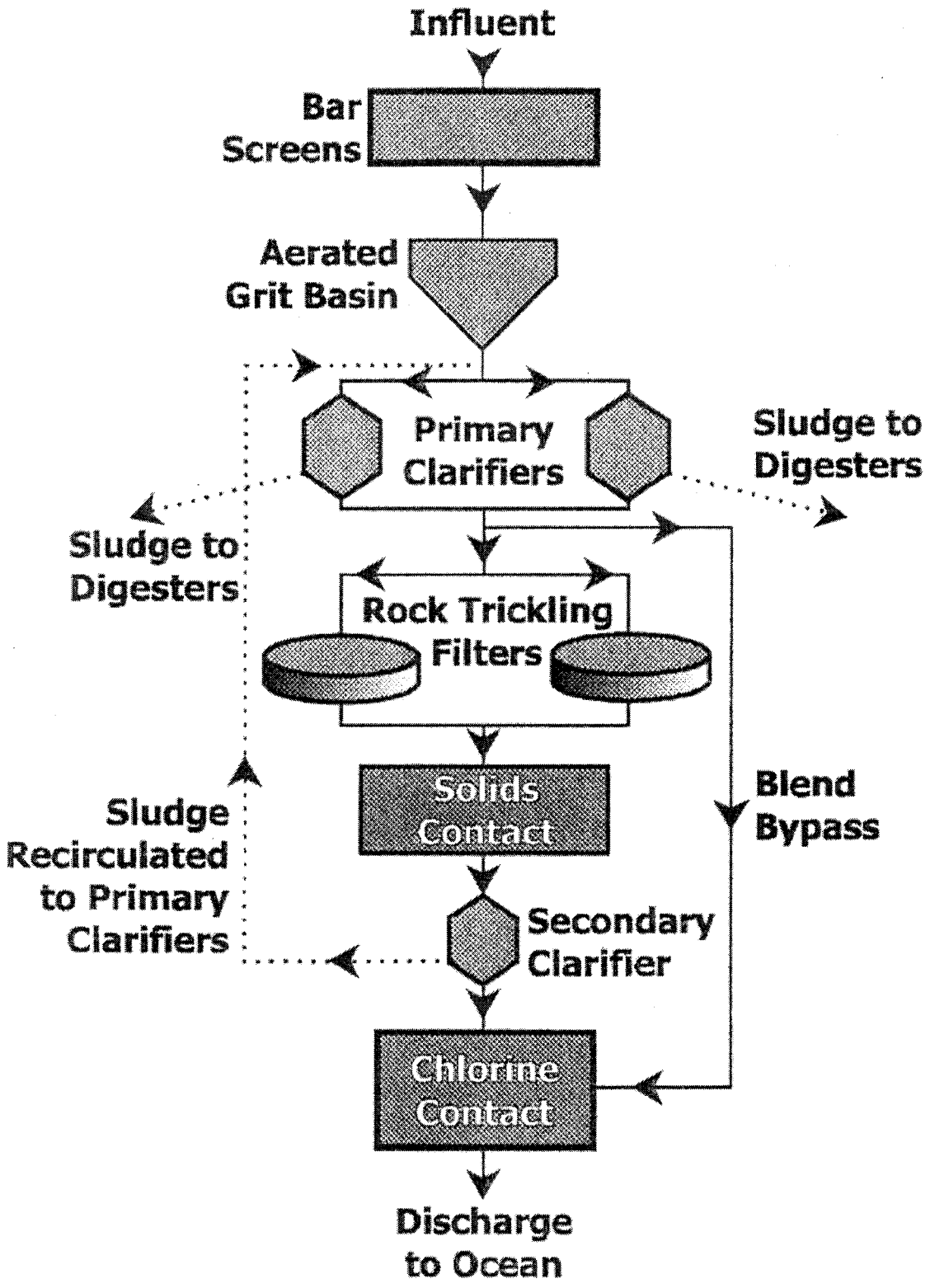
Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

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

ATTACHMENT B – TOPOGRAPHIC MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Dischargers must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Dischargers shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Dischargers in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*40 CFR §122.41(c)*].

C. Duty to Mitigate

The Dischargers shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. Proper Operation and Maintenance

The Dischargers shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Dischargers to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Dischargers only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*40 CFR §122.5(c)*].

F. Inspection and Entry

The Dischargers shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (U.S. EPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR §122.41(i)*] [*CWC 13383(c)*]:

1. Enter upon the Dischargers' premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*40 CFR §122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Dischargers may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Central Coast Water Board may take enforcement action against a discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*40 CFR §122.41(m)(4)(B)*]; and

c. The discharger submitted notice to the Central Coast Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)(C)*].

4. The Central Coast Water Board may approve an anticipated bypass, after considering its adverse effects, if the Central Coast Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*40 CFR §122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR §122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR §122.41(n)(3)*]:

a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

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

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [*40 CFR §122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*40 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Central Coast Water Board. The Central Coast Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five

years (or longer as required by 40 CFR Part 503), the Dischargers shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Central Coast Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Dischargers shall furnish to the Central Coast Water Board, SWRCB, or U.S. EPA within a reasonable time, any information which the Central Coast Water Board, SWRCB, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Dischargers shall also furnish to the Central Coast Water Board, SWRCB, or U.S. EPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Coast Water Board, SWRCB, and/or U.S. EPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].
2. All permit applications shall be signed as follows:

a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR §122.22(a)(1)*];

b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Central Coast Water Board, SWRCB, or U.S. EPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [*40 CFR §122.22(b)(2)*]; and

c. The written authorization is submitted to the Central Coast Water Board, SWRCB, or U.S. EPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Central Coast Water Board, SWRCB or U.S. EPA prior to or together with

any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR §122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Coast Water Board or SWRCB for reporting results of monitoring of sludge use or disposal practices [*40 CFR §122.41(l)(4)(i)*].

3. If the Dischargers monitor any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Coast Water Board [*40 CFR §122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*40 CFR §122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Dischargers shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period

of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)(C)*].

3. The Central Coast Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Dischargers shall give notice to the Central Coast Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR §122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR §122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Dischargers' sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Dischargers shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR §122.41(l)(7)*].

I. Other Information

When the Dischargers become aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Central Coast Water Board, SWRCB, or U.S. EPA, the Dischargers shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*40 CFR §122.41(a)(2)*] [*CWC 13385 and 13387*].

B. Any person may be assessed an administrative penalty by the Central Coast Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or

limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*40 CFR §122.41(a)(3)*].

C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*40 CFR §122.41(j)(5)*].

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*40 CFR §122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Central Coast Water Board as soon as they know or have reason to believe [*40 CFR §122.42(a)*]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(1)*]:

   a. 100 micrograms per liter (µg/L) [*40 CFR §122.42(a)(1)(i)*];

   b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(1)(ii)*];

   c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(1)(iii)*]; or

   d. The level established by the Central Coast Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(1)(iv)*].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that

discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(2)*]:

a. 500 micrograms per liter (µg/L) [*40 CFR §122.42(a)(2)(i)*];

b. 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(2)(ii)*];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(2)(iii)*]; or

d. The level established by the Central Coast Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(2)(iv)*].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Central Coast Water Board of the following [*40 CFR §122.42(b)*]:

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

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*40 CFR §122.42(b)(2)*].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [*40 CFR §122.42(b)(3)*].

ATTACHMENT D-1 – CENTRAL COAST WATER BOARD STANDARD PROVISIONS (JANUARY 1985)

A. General Permit Conditions:

Prohibitions:

1. Introduction of "incompatible wastes" to the treatment system is prohibited.

2. Discharge of high-level radiological waste and of radiological, chemical, and biological warfare agents is prohibited.

3. Discharge of "toxic pollutants" in violation of effluent standards and prohibitions established under Section 307(a) of the Clean Water Act is prohibited.

4. "Bypass" and "overflow" of untreated and partially treated waste is prohibited.

5. Discharge of sludge, sludge digester or thickener supernatant, and sludge drying bed leachate to drainageways, surface waters, or the ocean is prohibited.

6. Introduction of pollutants into the collection, treatment, or disposal system by an "indirect discharger" that:

   a. inhibit or disrupt the treatment process, system operation, or the eventual use or disposal of sludge; or,

   b. flow through the system to the receiving water untreated; and,

   c. cause or "significantly contribute" to a violation of any requirement of this Order, is prohibited.

7. Introduction of "pollutant free" wastewater to the collection, treatment, and disposal system in amounts that threaten compliance with this order is prohibited.

Provisions:

8. Collection, treatment, and discharge of waste shall not create a nuisance or pollution, as defined by Section 13050 of the California Water Code.

9. All facilities used for transport or treatment of wastes shall be adequately protected from inundation and washout as the result of a 100-year frequency flood.

10. Operation of collection, treatment, and disposal systems shall be in a manner that precludes public contact with wastewater.

11. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed in a manner approved by the Executive Officer.

12. Publicly owned wastewater treatment plants shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23 of the California Administrative Code.

13. After notice and opportunity for a hearing, this order may be terminated for cause, including, but not limited to:

    a. violation of any term or condition contained in this order;

    b. obtaining this order by misrepresentation, or by failure to disclose fully all relevant facts;

    c. a change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge; and,

    d. a substantial change in character, location, or volume of the discharge.

14. Provisions of this permit are severable. If any provision of the permit is found invalid, the remainder of the permit shall not be affected.

15. After notice and opportunity for hearing, this order may be modified or revoked and reissued for cause, including:

    a. Promulgation of a new or revised effluent standard or limitation;

    b. A material change in character, location, or volume of the discharge;

    c. Access to new information that affects the terms of the permit, including applicable schedules;

    d. Correction of technical mistakes or mistaken interpretations of law; and,

    e. Other causes set forth under Sub-part D of 40 CFR Part 122.

16. Safeguards shall be provided to assure maximal compliance with all terms and conditions of this permit. Safeguards shall include preventative and contingency plans and may also include alternative power sources, stand-by generators, retention capacity, operating procedures, or other precautions. Preventative and contingency plans for controlling and minimizing the affect of accidental discharges shall:

    a. identify possible situations that could cause "upset", "overflow" or "bypass", or other noncompliance. (Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.)

    b. evaluate the effectiveness of present facilities and procedures and describe procedures and steps to minimize or correct any adverse environmental impact resulting from noncompliance with the permit.

17. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

18. Physical Facilities shall be designed and constructed according to accepted engineering practice and shall be capable of full compliance with this order when properly operated and maintained. Proper operation and maintenance shall be described in an Operation and Maintenance Manual. Facilities shall be accessible during the wet-weather season.

19. Production and use of reclaimed water is subject to the approval of the Board. Production and use of reclaimed water shall be in conformance with reclamation criteria established in Chapter 3, Title 22, of the California Administrative Code and Chapter 7, Division 7, of the California Water Code. An engineering report pursuant to section 60323, Title 22, of the California Administrative Code is required and a waiver or water reclamation requirements from the Board is required before reclaimed water is supplied for any use, or to any user, not specifically identified and approved either in this Order or another order issued by this Board.

B. General Monitoring Requirements:

1. Monitoring location, minimum sampling frequency, and sampling method for each parameter shall comply with the Monitoring and Reporting Program of this Order.

2. If results of monitoring a pollutant appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed.

   For example, if copper is monitored annually and results exceed the six-month median numerical effluent limitation in the permit, monitoring of copper must be increased to a frequency of at least once every two months (ref. paragraph F.13.). If suspended solids are monitored weekly and results exceed the weekly average numerical limit in the permit, monitoring of suspended solids must be increased to at least four (4) samples every week (ref. paragraph F.14.).

3. Water quality analyses performed in order to monitor compliance with this permit shall be by a laboratory certified by the State Department of Health Services for the constituent(s) being analyzed. Bioassay(s) performed in order to monitor compliance with this permit shall be in accord with guidelines approved by the State Water Resources Control Board and the State Department of Fish and Game. If the laboratory used or proposed for use by the discharger is not certified by the California Department of Health Services or, where appropriate, the Department of Fish and Game due to restrictions in the State's laboratory certification program, the discharger shall be considered in compliance with this provision provided:

   a. Data results remain consistent with results of samples analyzed by the Central Coast Water Board;

b. A quality assurance program is used at the laboratory, including a manual containing steps followed in this program that is available for inspections by the staff of the Central Coast Water Board; and,

c. Certification is pursued in good faith and obtained as soon as possible after the program is reinstated.

4. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. Samples shall be taken during periods of peak loading conditions. Influent samples shall be samples collected from the combined flows of all incoming wastes, excluding recycled wastes. Effluent samples shall be samples collected downstream of the last treatment unit and tributary flow and upstream of any mixing with receiving waters.

5. 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.

C. General Reporting Requirements:

1. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of the Monitoring and Reporting Program shall include at least the following information:

   a. A description of climatic and receiving water characteristics at the time of sampling (weather observations, floating debris, discoloration, wind speed and direction, swell or wave action, time of sampling, tide height, etc.).

   b. A description of sampling stations, including differences unique to each station (e.g., station location, grain size, rocks, shell litter, calcareous worm tubes, evident life, etc.).

   c. A description of the sampling procedures and preservation sequence used in the survey.

   d. A description of the exact method used for laboratory analysis. In general, analysis shall be conducted according to paragraph B.1 above, and Attachment D, Federal Standard Provision III.B. However, variations in procedure are acceptable to accommodate the special requirements of sediment analysis. All such variations must be reported with the test results.

   e. A brief discussion of the results of the survey. The discussion shall compare data from the control station with data from the outfall stations. All tabulations and computations shall be explained.

2. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule shall be submitted within 14 days following each scheduled date unless otherwise specified within the permit. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.

3. The "Discharger" shall file a report of waste discharge or secure a waiver from the Executive Officer at least 180 days before making any material change or proposed change in the character, location, or plume of the discharge.

4. Within 120 days after the discharger discovers, or is notified by the Central Coast Water Board, that monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years, the discharger shall file a written report with the Central Coast Water Board. The report shall include:

   a. the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,

   b. a schedule for studies, design, and other steps needed to provide additional capacity for waste treatment and/or disposal facilities before the waste flow rate equals the capacity of present units.

   In addition to complying with Attachment D, Federal Standard Provision V.B, the required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste collection, treatment, or disposal facilities.

5. All "Dischargers" shall submit reports to the:

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

   In addition, "Dischargers" with designated major discharges shall submit a copy of each document to:

   Regional Administrator
   US Environmental Protection Agency, Region 9
   Attention: CWA Standards and Permits Office (WTR-5)
   75 Hawthorne Street
   San Francisco, California 94105

6. Transfer of control or ownership of a waste discharge facility must be preceded by a notice to the Central Coast Water Board at least 30 days in advance of the proposed transfer date. The notice must include a written agreement between the existing "Discharger" and proposed "Discharger" containing specific date for transfer of responsibility, coverage, and liability between them. Whether a permit may be transferred without modification or revocation and reissuance is at the discretion of the Board. If permit modification or revocation and reissuance is necessary, transfer may be delayed 180 days after the Central Coast Water Board's receipt of a complete permit application. Please also see Attachment D, Federal Standard Provision II.C.

7. Except for data determined to be confidential under Section 308 of the Clean Water Act (excludes effluent data and permit applications), all reports prepared in accordance with this permit shall be

available for public inspection at the office of the Central Coast Water Board or Regional Administrator of U.S. EPA. Please also see Attachment D, Federal Standard Provision IV.C.

8. By February 1st of each year (unless otherwise specified), the discharger shall submit an annual report to the Central Coast Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year. The discharger shall discuss the compliance record and corrective actions taken, or which may be needed, to bring the discharge into full compliance. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall inform the Board of the date of the Facility's Operation and Maintenance Manual (including contingency plans as described in Provision A.16.), of the date the manual was last reviewed, and whether the manual is complete and valid for the current facility. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with effluent limits and provide a summary of performance relative to Section B above, *General Monitoring Requirements*.

   If the facility treats industrial or domestic wastewater and there is no provision for periodic sludge monitoring in the Monitoring and Reporting Program, the report shall include a summary of sludge quantities, analyses of its chemical and moisture content, and its ultimate destination.

   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. 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. 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. Definitions [Not otherwise included in Attachment A to this Order]:

1. "Bypass" means the diversion of waste streams from any portion of a treatment facility.

2. 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.

3. "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".

4. "Duly Authorized Representative" is one where:

   a. the authorization is made in writing by a person described in the signatory paragraph of Attachment D, Federal Standard Provision V.B;

   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 paragraph F.4 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:

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

   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:

    mass emission rate (lbs/day) = 8.34 x Q x C; and,

    mass emission rate (kg/day) = 3.79 x Q x 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 paragraph 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

    Average = $(X_1 + X_2 + ... + X_n) / n$

    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. "Discharger", as used herein, means, as appropriate: (l) the Discharger, (2) the local sewering 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.)

18. "Pollutant-free wastewater" means inflow and infiltration, storm waters, and cooling waters and condensates which are essentially free of pollutants.

19. "Primary Industry Category" means any industry category listed in 40 CFR Part 122, Appendix A.

20. "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):

    $C_{Effluent}$ Removal Efficiency (%) = lOO x (l – $C_{effluent}$ / $C_{influent}$)

21. "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.

22. "Sludge" means the solids, residues, and precipitates separated from, or created in, wastewater by the unit processes of a treatment system.

23. 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.

24. "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 (Attachment D, Federal Standard Provision V.E.).

25. "Upset" means an exceptional incident causing noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. It does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

26. "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.

Attachment E – Monitoring and Reporting Program – Table of Contents

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 (U.S. EPA) 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.

II. MONITORING LOCATIONS

The Dischargers 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	Influent, upstream of any in-plant return flows	--	--	--
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	--	--	--

Monitoring Location Name	Description	Latitude	Longitude	Distance from Reference
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
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

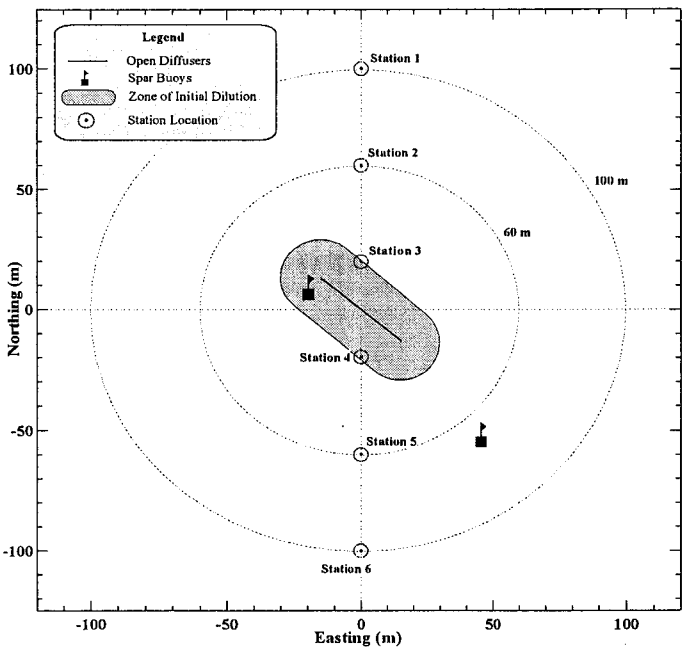


Figure 1: Vertical Receiving Water (Ocean) Monitoring Locations

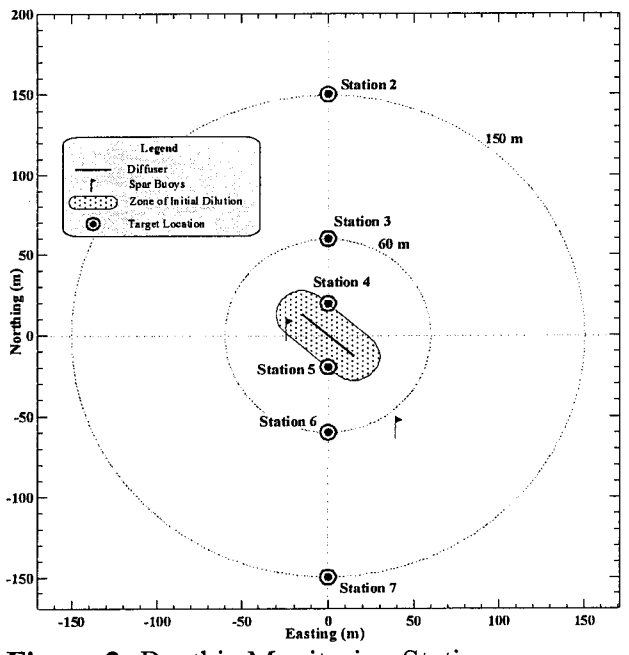


Figure 2: Benthic Monitoring Stations

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-INF

1. The Dischargers shall monitor representative samples 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 Dischargers 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[1]
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[2]	TUc[3]	24-hr Composite	Semi-annually (Jan/July)
Ammonia (as N)	mg/L	Grab	Monthly

[1] 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.

[2] See MRP Section V, *Whole Effluent Toxicity Testing Requirements*, below.

PROTECTION OF MARINE AQUATIC LIFE

Parameter	Units	Type of Sample	Minimum Frequency of Sampling/Analysis	Minimum Levels[4] (µg/L)
Arsenic	mg/L	24-hr. Composite	Semi-annually	All methods contained in Table II-3, pg 33 of 2001 Ocean Plan, with exception to the Direct Current Plasma method
Cadmium	mg/L	" "	" "	" "
Chromium(Hex)[5]	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 (non-chlorinated)	mg/L	Grab	Annually	See Appendix II, pg. 29 of 2001 Ocean Plan
Chlorinated Phenolics	mg/L	" "	" "	" "
Endosulfan[6]	µg/L	24-hr. Composite	" "	0.01
Endrin	µg/L	" "	" "	0.01
HCH[7]	µg/L	" "	" "	See Table II-4, pg 34 of 2001 Ocean Plan
Radionuclide	pCi/L	" "	" "	--

[4] 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 date 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).

Dischargers must report analytical results using the following protocols:

1. Sample results greater than or equal to the reported Minimum* 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.

[5] Dischargers may at their option meet this limitation as total chromium limitation.

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

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

PROTECTION OF HUMAN HEALTH – NONCARCINOGENS[8]

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatograpy / Mass Spectrometry Method
Acrolein	mg/L	24-hr. Composite	Annually	2	5
Antimony	g/L	" "	" "	All methods contained in Table II-3, pg 33 of 2001 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. pg 33 of 2001 Ocean Plan	
Di-n-butyl Phthalate	g/L	" "	" "	--	10
Dichlorobenzenes[9]	g/L	" "	" "	See Table II-2. pg 30 of 2001 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
Thallium	mg/L	" "	" "	See Table II-3. pg 33 of 2001 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 – CARCINOGENS[8]

Parameter	**Units**	**Type of Sample**	**Minimum Frequency of Analysis**	**Minimum Levels (µg/L)**	
				Gas Chromatography Method	**Gas Chromatograpy / 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

[8] After results are reported, the Discharger may request to the Regional Board and U.S. EPA that only those parameters detected during the first year of sampling be analyzed during the remainder of the permit.

[9] 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 Chromatograpy / Mass Spectrometry Method
Beryllium	µg/L	" "	" "	All methods contained in Table II-3, pg 33 of 2001 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
Carbon tetrachloride	mg/L	" "	" "	0.5	2
Chlordane[10]	ng/L	" "	" "	0.1	--
Chlorodibromomethane	µg/L	" "	" "	0.5	2
Chloroform	mg/L	" "	" "	0.5	2
DDT[11]	ng/L	" "	" "	See Table II-4, pg 34 of 2001 Ocean Plan	
1,4-dichlorobenzene	mg/L	" "	" "	See Table II-1 and II-2, pgs. 29-30 of 2001 Ocean Plan	
3,3-dichlorobenzidine	µg/L	" "	" "	--	5
1,2-dichloroethane	mg/L	" "	" "	0.5	2
1,1-dichloroethylene	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, pgs. 29-30 of 2001 Ocean Plan	
dieldrin	ng/L	" "	" "	0.01	--
2,4-dinitrotoluene	mg/L	" "	" "	10	5
1,2-diphenylhydrazine	µg/L	" "	" "	--	1
Halomethanes[12]	mg/L	" "	" "		
Heptachlor	µg/L	" "	" "	0.01	--
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[13]	µg/L	" "	" "	See Appendix II, pg. 29 of 2001 Ocean Plan	

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

[11] DDT shall mean the sum of 4,4-DDT, 2,4-DDT, 2,4-DDE, 4,4-DDD, and 2,4-DDD.

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

[13] 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.

Parameter	Units	Type of Sample	Minimum Frequency of Analysis	Minimum Levels (µg/L)	
				Gas Chromatography Method	Gas Chromatograpy / Mass Spectrometry Method
PCBs[14]	ng/L	" "	" "	See Table II-4, pg 34 of 2001 Ocean Plan	
TCDD equivalents[15]	pg/L	" "	" "	--	--
1,1,2,2-tetrachloroethane	g/L	" "	" "	0.5	2
Tetrachloroethylene	mg/L	" "	" "	0.5	2
Toxaphene	ng/L	" "	" "	0.5	--
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 Dischargers 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[16]	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

[14] 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.

[15] 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		

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

Constituent	Value	Units
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

OBJECTIVES FOR THE PROTECTION OF HUMAN HEATH –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
dichloromethane	--	--
1,3-dichloropropene	--	--
Dieldrin	0.02	kg/yr

Constituent	Value	Units
2,4-Dinitrotoluene	142	kg/yr
1,2-Diphenylhydrizine	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

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. The Dischargers shall use the critical life stage toxicity tests specified in the table below to measure TUc, in accordance with the Ocean Plan, Appendix III, *Standard Monitoring Procedures*. 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 of no fewer than two tests, monitoring may be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the open ocean along the Pacific coast. 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 V-1 – Approved Tests – Chronic Toxicity TUc
(Table III-1 from Appendix III of the Ocean Plan)

Species	Effect	Tier	Reference
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	1,3
red abalone, *Haliotis rufescens*	Abnormal shell development	1	1,3
oyster, *Crassostrea gigas*; mussels, *Mytilus spp.*	Abnormal shell development; percent survival	1	1,3

Table V-1 – Approved Tests – Chronic Toxicity TUc (Table III-1 from Appendix III of the Ocean Plan)			
Species	**Effect**	**Tier**	**Reference**
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	Percent normal development	1	1,3
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	Percent fertilization	1	1,3
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. A Regional Board may approve the use of a second tier test method for waste discharges if first tier organisms are not available.

Protocol References from the Approved Tests – Chronic Toxicity TUc Table

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.

2. 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. U.S. EPA Report No. EPA-600-4-91-003.

3. SWRCB 1996. Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project. 96-1WQ.

4. 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.

B. Toxicity Identification / Reduction Evaluations

If toxicity monitoring shows a violation of toxicity limitations of this Order or a toxicity objective in Table B of the Ocean Plan, the Dischargers shall increase the frequency of toxicity testing to once per week and submit the results within 15 days of the conclusion of each test to the Central Coast Water Board Executive Officer. The Executive Officer will determine whether to initiate enforcement action and/or whether to require the Dischargers to

conduct a Toxicity Reduction Evaluation (TRE). The TRE shall include all reasonable steps to identify the source(s) of toxicity. Once sources of toxicity are identified, the Dischargers shall take all reasonable steps necessary to reduce toxicity to the required level.

The basis of the TRE shall be the following (or later revised editions):

- U.S. EPA's *Methods for Aquatic Toxicity Identification Evaluations: Phase I, Toxicity Characterization Procedures, 2nd Edition*, 1991b (EPA 600-6-91-003)
- U.S. EPA's *Methods for Aquatic Toxicity Identification Evaluations: Phase II, Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity*, 1993a (EPA 600-R-92-080)
- U.S. EPA's *Methods for Aquatic Toxicity Identification Evaluations: Phase III, Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity*, 1993b (EPA 600-R-92-081)
- U.S. EPA's *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002), August 1999

The Dischargers shall initiate a TRE according to the following schedule:

Task	Time Schedule
a. Take all reasonable measures necessary to immediately reduce toxicity, where source is known.	Within 24 hours of identification of non-compliance
b. Submit to the Executive Officer a TRE study plan describing the toxicity reduction procedures to be employed.	Within 60 days of identification of non-compliance
c. Initiate the TRE (includes Toxicity Identification Evaluation or TIE according to the above U.S. EPA methods)	To be determined by the Executive Officer
d. Conduct the TRE following the procedures in the plan.	To be determined by the Executive Officer
e. 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
f. Implement corrective actions to meet permit limits and conditions.	Within 7 days of notification by the Executive Officer
g. Return to regular monitoring after implementing corrective measures and approval by the EO.	One-year period or as specified in the plan

VI. 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 U.S. EPA may require daily surf-zone monitoring to continue beyond 4 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[17,18], and Enterococcus[19], 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

[17] 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.

[18] 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 U.S. EPA and determined appropriate by the Executive Officer.

[19] 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.

			Sampling/Analysis
Floating Particulates	Visual	Surface	Quarterly
Grease and Oil	Visual	Surface	Quarterly
Discoloration	Visual	Surface	Quarterly
Natural light and/or total irradiance	Light transmissivity and/or total irradiance	Entire water column	Quarterly
Dissolved Oxygen	mg/L	Entire water column	Quarterly
pH	units	Entire water column	Quarterly
Salinity	ppt	Entire water column	Quarterly
Temperature	°C	Entire water column	Quarterly

VII. 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
Nonchlorinated Phenolics	µg/kg	Once in the life of permit (2006)
Chlorinated Phenolics	µg/kg	Once in the life of permit (2006)
Aldrin	µg/kg	Once in the life of permit (2006)
Dieldrin	µg/kg	Once in the life of permit (2006)
Chlordane	µg/kg	Once in the life of permit (2006)
DDT, DDE, DDD	µg/kg	Once in the life of permit (2006)
Endrin	µg/kg	Once in the life of permit (2006)
PAHs	µg/kg	Once in the life of permit (2006)
PCBs	µg/kg	Once in the life of permit (2006)
Toxaphene	µg/kg	Once in the life of permit (2006)

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 U.S. EPA 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 Dischargers' 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 m^2 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.

VIII. 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. Annual biosolids production in dry tons and percent solids.

2. A schematic diagram showing biosolids handling facilities (e.g., digesters, lagoons, drying beds, incinerators) and solids flow diagram.

3. A narrative description of biosolids dewatering and other treatment processes, including process parameters. For example, if biosolids are digested, report average temperature and retention time of the digesters. If drying beds are used, report depth of application and drying time. If composting is used, report the temperature achieved and duration.

4. 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.

   a. For landfill disposal include: 1) the Regional Board's WDR numbers that regulate the landfills used, 2) the present classifications of the landfills used, and 3) the names and locations of the facilities receiving biosolids.

   b. For land application include: 1) the location of the site(s), 2) the Regional Board's WDR numbers that regulate the site(s), 3) the application rate in lbs/acre/year (specify wet or dry), and 4) subsequent uses of the land.

5. 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 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 as follows:

Constituent	Units	Sample Type	Minimum Frequency of Sampling/Analysis
Quantity Removed	Tons or yd^3	Measured	During Removal

Constituent	Units	Sample Type	Minimum Frequency of Sampling/Analysis
Location of Disposal	Narrative	--	During Removal
Pathogen Density	--	--	per 40 CFR 503
Moisture Content	%	Grab	Annually
Total Kjeldahl Nitrogen	mg/kg	Grab	Annually
Ammonia (as N)	mg/kg	Grab	Annually
Nitrate (as N)	mg/kg	Grab	Annually
Total Phosphorus	mg/kg	Grab	Annually
Grease & Oil	mg/kg	Grab	Annually
pH	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)[2]	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
Zinc	mg/kg	Grab	Annually
Priority Pollutants (excluding asbestos)	mg/kg	Grab	Annually

IX. OUTFALL AND DIFFUSER INSPECTION

The Dischargers 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 include general observations and photographic records of the outfall pipe/diffuser system and the surrounding ocean bottom in the vicinity of the outfall/diffuser. The inspection shall be conducted along the outfall pipe/diffuser system from landfall to its ocean terminus. A report detailing inspection results shall be submitted to the Central Coast Water Board and U.S. EPA with the annual report required in Standard Provision C.16.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Dischargers shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Dischargers to electronically submit self-monitoring reports. Until such notification is given, the Dischargers shall submit self-monitoring reports in accordance with the requirements described below.

2. Monthly monitoring reports shall be submitted for all monitoring and sampling herein by the last day of the month following the sampling or monitoring event. An annual report shall

be submitted by April 1st of each year, in accordance with Standard Provision C.16. In addition, monitoring data (effluent and ambient) shall be submitted in an electronic format to U.S. EPA annually, in a form that is compatible with U.S. EPA's STORET database. As specified below, the annual report shall also include a summary of any sewage spills or overflows from the collection system.

3. If results of monitoring a constituent appear to violate effluent limitations based on a weekly, monthly, 30-day, or six-month period, but compliance or non-compliance cannot be validated because sampling is too infrequent, the frequency of sampling shall be increased to validate the test within the next monitoring period. The increased frequency shall be maintained until the Executive Officer agrees the original monitoring frequency may be resumed, as stated in B.2 of the Standard Provisions and Reporting Requirements.

4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	First day of second calendar month following month of sampling
X / hour	Permit effective date	Hourly	First day of second calendar month following month of sampling
X / day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling
X / week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
X / month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
X / quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
X / semi-annual period	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
X / year	January 1 following (or on) permit effective date	January 1 through December 31	April 1

5. The Dischargers shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

6. The Dischargers shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

7. The Dischargers shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

8. SMRs must be submitted to the Central Coast Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

   Central Coast Regional Water Quality Control Board
   895 Aerovista Place, Suite 101
   San Luis Obispo, CA 93401-5411

C. Discharge Monitoring Reports (DMRs)

1. As described in Section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Dischargers to electronically submit self-monitoring reports. Until such notification is given, the Dischargers shall submit discharge-monitoring reports (DMRs) in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy of the DMR to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official U.S. EPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Sewage Spill Reporting

1. Sewage spills greater than 1,000 gallons and/or all sewage spills that enter a water body of the State, or occur where public contact is likely, regardless of the size, shall be reported to the Central Coast 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 Dischargers have knowledge of the overflow.

2. Unless fully contained, sewage spills 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 Central Coast Water Board within five days of the spill, and shall include no less information than is required on the current Sewage Spill Report Form (see Attachment E), or equivalent, as approved by the Central Coast Water 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 sewage spill incident and cleanup shall be submitted to the Central Coast Water Board in hard copy and electronic format.

4. The Dischargers shall sample all spills to surface waters to determine their effects on surface waters and submit the data to the Executive Officer in the next monthly monitoring report. 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 fresh water. Sampling shall be conducted in the affected receiving water body upstream, at, and downstream of the spill's point of entry, and as necessary to characterize the spill's impact and to ensure adequate clean-up. Upstream monitoring is only required when the discharge is to a creek, stream, or similar open, accessible channel with continuous background flow.

5. Spills under 1,000 gallons that do not enter a water body shall be reported to the Central Coast Water Board in writing and electronically (Excel spreadsheet preferred) within the next monthly monitoring report. 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.

6. The Dischargers shall submit to the Central Coast Water Board with the annual report required above, a summary of all spills between January 1 and December 31 of the previous year. The summary shall include the following information for each spill:

    a. Information requested in the Sewage Spill Report Form (Attachment E);
    b. How the spill volume was estimated and/or calculated;
    c. Photograph(s) of spill, if taken;
    d. Where the spill entered any storm drain inlet or surface waters;
    e. Steps taken or planned to reduce, eliminate, and prevent recurrence of the spill, and a schedule of major milestones for those steps;
    f. Steps taken or planned to mitigate the impact(s) of the spill, and a schedule of major milestones for those steps;
    g. Any additional correspondence and follow-up reports, as necessary, to supplement the Sewage Spill Report Form and to provide detailed information on cause, response, adverse effects, corrective actions, preventative measures, or other information.

    The annual summary shall include detailed evaluations of repetitive or chronically occurring circumstances, such as problematic collection system areas or common spill causes, and the corrective actions taken to address such systematic problems.

    If no sewage spills occurred in the last calendar year, a statement certifying that no sewage spills occurred may be submitted in lieu of the annual summary.

7. In accordance with the Governor's Office of Emergency Services (OES) 2002 Fact Sheet regarding the reporting of sewage releases, the California Water Code, commencing with Section 13271, requires that a discharge of sewage to State waters must be reported to OES.

8. To report sewage releases of 1,000 gallons or more (currently the federal reportable quantity) to OES, verbally notify the OES Warning Center at: (800) 852-7550, or (916) 845-8911. The following fax number should be used for follow-up information only: (916) 262-1677. 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.

9. 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 Dischargers' responsibility to report to OES, and do not alter the Central Coast Water Board's reporting policies or waste discharge requirements.

Attachment F – Fact Sheet – Table of Contents

ATTACHMENT F – FACT SHEET

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility:

WDID:	3 400103001
Dischargers:	City of Morro Bay and Cayucos Sanitary District
Name of Facility:	Morro Bay/Cayucos WWTP
Facility Address:	160 Atascadero Road
	Morro Bay, California 93442
	San Luis Obispo County
Facility Contact, Title and Phone:	Bruce Keogh, Wastewater Division Manager, (805) 772-6272
Authorized Person to Sign and Submit Reports:	Bruce Keogh, Wastewater Division Manager, (805) 772-6272
Mailing Address:	595 Harbor Street, Morro Bay, California 93442
Billing Address:	595 Harbor Street, Morro Bay, California 93442
Type of Facility:	Municipal WWTP
Major or Minor Facility:	Major
Threat to Water Quality:	1
Complexity:	B
Pretreatment Program:	No
Reclamation Requirements:	None
Facility Permitted Flow:	Peak seasonal dry weather flow of 2.36 MGD
Facility Design Flow:	Annual average of 2.06 MGD, Peak seasonal dry weather flow of 2.36 MGD
Watershed:	Estero Bay
Receiving Water:	Pacific Ocean
Receiving Water Type	Ocean

A. The City of Morro Bay and Cayucos Sanitary District (hereinafter Dischargers) are the owner and operator of the Morro Bay/Cayucos Wastewater Treatment Plant (hereinafter Facility), a municipal wastewater treatment plant.

B. The Facility discharges wastewater to the Pacific Ocean at Estero Bay, a water of the United States and is currently regulated by Order No. 98-15 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0047881, which was adopted by the Central Coast Water Board on December 11, 1998. The permit expired March 1, 2004, but continues in force until the effective date of the new permit, in accordance with 40 CFR Part 122.6.

C. The Dischargers applied for reissuance of their 301(h)-modified permit on July 7, 2003.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment. The treatment plant provides treatment by a split stream process of physical and biological treatment. All wastewater flows through primary sedimentation basins. Approximately 1 MGD flows through secondary treatment facilities, including trickling filters, solids-contact, and secondary clarification. Secondary treated wastewater is then blended with primary treated wastewater and disinfected by chlorination, and then dechlorinated prior to discharge to the Pacific Ocean. Historically, biosolids have been anaerobically digested and dried, composted, and then trucked to the San Joaquin Valley for use as a soil conditioner. However, in the past two years, the MBCSD has successfully implemented a composting operation at the treatment plant that will allow beneficial reuse of biosolids locally.

B. Effluent characteristics. According to 2002 monitoring data, effluent has the following characteristics. Only chemicals detected in the last nine sampling events are listed.

Parameter/Pollutant	Units	Average Daily Value	Maximum Daily Value	Pollutant	Units	Average Daily Value	Maximum Daily Value
pH	--	--	7.4 – 7.7	Zinc	µg/L	12	58
Temperature	°C	18.8	20	Cyanide	mg/L	0.003	0.025
Biochemical Oxygen Demand	mg/L	60	98	Total Phenolic Compounds	µg/L	0.4	3.6
Total Suspended Solids	mg/L	38	92	Benzene	µg/L	0.5	4.2
Total Coliform	MPN/ 100 mL	20	900	Chloroform	µg/L	0.36	1.2
Ammonia (as N)	mg/L	29	40	Ethylbenzene	µg/L	0.4	3.6
Total Chlorine Residual	mg/L	0.11	10+	Tetrachloroethylene	µg/L	0.09	0.85
Oil and Grease	mg/L	4	6.5	Toluene	µg/L	0.22	0.77
Chromium	µg/L	0.18	1.6	Phenol	µg/L	0.45	3.6
Copper	µg/L	20	50	Bis (2-Ethylhexyl) Phthalate	µg/L	7.6	80
Lead	µg/L	0.94	6.5	1,4-Dichlorobenzene	µg/L	0.08	0.76
Silver	µg/L	1.1	10	Diethyl Phthalate	µg/L	1.2	4.8

C. Discharge Points and Receiving Waters. Effluent is discharged to the Pacific Ocean through a 27-inch diameter outfall that terminates with a 170-foot long diffuser in approximately 50 feet of water, 2900 feet from shore. The diffuser was modeled to achieve a minimum initial dilution of 133 parts seawater for every part effluent. The zone of initial dilution is approximately 103 feet wide 240 feet long.

D. Regulatory History. The treatment plant was originally constructed in 1954. It was upgraded in 1964 to a capacity of 1.0 MGD. In 1982, the outfall was extended further offshore to its current location. A new treatment plant was designed in 1981 to expand capacity and meet secondary treatment standards (discussed further below). Financial aid from state and federal agencies was not available. Consequently, the treatment plant's design was modified to provide biological treatment to a majority (~1 MGD), but not all, of the projected flow. In

March 1983, Central Coast Water Board staff tentatively concurred that such a discharge would comply with applicable state laws, including water quality standards, and would not result in requirements for additional treatment, pollution control, or other requirements on any other point or non-point sources.

The treatment plant was upgraded from 1983 to 1985 to a peak seasonal dry weather flow of 2.36 MGD. In 1985, U.S. EPA approved a Clean Water Act Section 301(h) Modified NPDES Permit that waived full secondary treatment requirements for Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS). The Permit required 75% removal of TSS and included a 30-day average TSS effluent limit of 70 mg/L. The Permit required 30% removal of BOD_5 and included a 30-day average BOD_5 effluent limit of 120 mg/L.

The permit also required an extensive monitoring program. The monitoring program is discussed on page F-9.

The Permit was first reissued in 1992. The second Permit reissuance process began in May 1997. Multiple discussions between the Dischargers, Central Coast Water Board staff, and U.S. EPA staff resulted in several revisions to the permit and monitoring program, including a slight reduction in allowed mass-emissions of BOD_5, TSS, and oil & grease; expanded biosolids reporting; revised benthic sampling locations; and a revised receiving water sampling program. In July 1998, staff again determined that the discharge would comply with applicable state laws, including water quality standards, and would not result in requirements for additional treatment, pollution control, or other requirements on any other pollutant sources. U.S. EPA issued a tentative decision to grant another modification of secondary treatment requirements in September 1998. The Central Coast Water Board approved the NPDES Permit, waiving secondary treatment requirements, in December 1998. The California Coastal Commission determined the Permit was consistent with the Coastal Zone Management Act on January 13, 1998. U.S. EPA issued the Permit on January 26, 1999, which finally became effective March 1, 1999 (33 days after issuance).

Morro Bay/Cayucos Wastewater Treatment Plant is now one of only three remaining in California that operates under a 301(h)-modified permit. Others include Goleta Sanitary District and San Diego. In 2004, Goleta Sanitary District and the Central Coast Water Board entered an agreement requiring an upgrade to full secondary treatment standards by November 2014. Orange County Sanitation District, the largest in the nation to operate under a 301(h)-modified permit, recently elected to upgrade its treatment facilities to meet secondary treatment standards and forgo its 301(h) modified permit.

In anticipation of this Permit reissuance process, staff met with and sent a letter to the Dischargers in January 2003 that requested they consider upgrading the treatment plant to meet federal secondary treatment standards and forgo their 301(h)-modified permit. In a March 20, 2003 response, City of Morro Bay Manager Robert Hendrix wrote:

"...we are using your correspondence as a catalyst for the formation of a long-term future policy on wastewater treatment. The [Morro Bay] City Council and [Cayucos] Sanitary District Board have selected members to serve on a subcommittee to work with your staff to consider a number of alternatives, formulate a draft policy or policies, and then return to the

full legislative body in the late Spring of this year [2003] with a recommended course of action."

In mid-2003, the subcommittee commissioned a study as to whether an equalization basin could be added to improve treatment efficiency and allow the discharge to meet secondary treatment standards. The study concluded that an equalization basin would not accomplish this goal.

The Dischargers submitted an application for reissuance of their Clean Water Act Section 301(h) Modified NPDES Permit on July 7, 2003. They also requested a determination ("401 Certification") as to whether the discharge will comply with applicable state laws, including water quality standards, and will not result in requirements for additional treatment, pollution control, or other requirements on any other pollutant sources. In an August 26, 2003 letter, staff declined to make such a determination, instead deferring to the Central Coast Water Board to make such a determination through approval or disapproval of the NPDES Permit. This is more appropriate because of the complex legal issues, and it is a more comprehensive and publicly transparent process.

The existing permit expired on March 1, 2004, but continues in force until the effective date of reissuance, in accordance with 40 CFR Part 122.6.

In June 2004, after public opposition to the 301(h)-modified permit, the Dischargers commenced a process to upgrade the treatment plant to meet secondary treatment standards. The Dischargers hired Carollo Engineers to assist in development of a detailed timeline to implement the upgrade. Water Board staff and U.S. EPA chose to delay the Permit reissuance process until the timeline was developed. In April 2005, Carollo Engineers presented a 15-year timeline at a public meeting of the Dischargers. After considering many public comments in opposition to the 15-year timeline, the Dischargers rejected the 15-year timeline and directed Carollo Engineers to return with a timeline that was as "quick as possible."

In May 2005, Carollo Engineers returned and presented a 9.5-year timeline to the Dischargers. The 9.5-year timeline is based on the shortest reasonable time necessary to select an engineering consultant, coordinate between the Dischargers, develop a facility plan, obtain financing and permits, and design and construct the improvements. The 9.5-year timeline requires the Dischargers to achieve full compliance with secondary treatment standards by June 23, 2015. The Dischargers accepted the 9.5-year timeline and formally proposed it to Water Board staff on June 15, 2005. Water Board staff met with the Dischargers July 15, 2005 and tentatively agreed to the 9.5-year timeline. Water Board staff and the Dischargers drafted a tentative settlement agreement that enforces the 9.5 year timeline, and provides for one more 301(h)-modified permit. This 301(h)-modified permit is necessary because the timeline to achieve compliance with secondary treatment standards exceeds the 5-year life of an NPDES permit. The next NPDES permit (March 2010, if the Water Board adopts a permit at this hearing) will contain secondary treatment requirements, and will be accompanied by a time schedule or other order to shield the Dischargers from mandatory minimum penalties until the upgrade is completed. If State and federal law (see 40 CFR 122.47) allow a compliance schedule in the NPDES permit, the permit will include the compliance schedule and no time

schedule or other order will be necessary. The tentative settlement agreement contains additional provisions regarding new evidence and Central Coast Water Board discretion.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Central Coast Water Board adopted a Water Quality Control Plan for the Central Coast Region (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Central Coast Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Beneficial uses applicable to Pacific Ocean are as follows:

Discharge Point	Receiving Water	Beneficial Uses
001	Pacific Ocean	Water contact recreation (REC-1); Non-contact water recreation (REC-2); Industrial service supply (IND); Navigation (NAV); Marine habitat (MAR); Shellfish harvesting (SHELL) ; Commercial and sport fishing (COMM); Rare, threatened, or endangered species (RARE); Wildlife habitat (WILD).

2. **Secondary Treatment Standards and Clean Water Act Section 301(h).** The 1972 Clean Water Act required publicly owned treatment works to meet treatment standards that were based on performance of wastewater treatment technology available at that time. Clean

Water Act Section 301 established a required performance level, referred to as "secondary treatment," that publicly owned treatment works were required to meet by July 1, 1977. The secondary treatment standards, as found in 40 CFR Part 133, are:

Parameter	30-Day Average	7-Day Average
BOD_5 and TSS	30 mg/L	45 mg/L
BOD and TSS Removal	At least 85%	--
pH	6 – 9 at all times	

Due to the extensive volume of the ocean relative to inland water bodies, dilution of wastewater discharges to the ocean is generally much greater than discharges to inland water bodies. Most major ocean discharges in the Central Coast Region achieve initial dilution of greater than 100 parts seawater for every part effluent. On the contrary, most inland discharges in the Central Coast Region are to water bodies with little or no natural flow, therefore little or no dilution occurs. Although effluent BOD_5 and TSS values for a typical ocean discharge may exceed secondary treatment standards, the final concentration of these pollutants in the receiving water will be far less than a typical inland surface water discharge that meets secondary treatment standards. This dilution effect is the primary basis for the modification of secondary treatment standards provided in Clean Water Act Section 301(h). However, the direction of our laws, regulations, and policies is steadily toward reducing the discharge of pollution to the environment, not justifying pollutant loading with dilution. There are several additional factors that must be considered before approving a 301(h)-Modified permit, as noted below.

Clean Water Act Section 301(h) provides for a modification of secondary treatment standards for publicly owned treatment works that discharge into marine waters if the modified requirements do not interfere with the attainment or maintenance of water quality. U.S. EPA has promulgated specific regulations pertaining to Clean Water Act Section 301(h) in 40 CFR, Part 125, Subpart G.

In order to obtain a 301(h)-modified permit, an applicant must demonstrate that:

- There is an applicable water quality standard specific to the pollutant for which the modification is requested (usually BOD_5 and TSS);

- The discharge of pollutants in accordance with such modified requirements will not interfere, alone or in combination with pollutants from other sources, with the attainment or maintenance of that water quality which assures protection of public water supplies and protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife, and allows recreational activities, in and on the water;

- The applicant has established a system for monitoring the impact of such discharge on a representative sample of aquatic biota, to the extent practicable, and the scope of such monitoring is limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge;

- Such modified requirements will not result in any additional requirements on any other point or nonpoint source;

- All applicable pretreatment requirements for sources introducing waste into such treatment works will be enforced;

- In the case of any treatment works serving a population of 50,000 or more, with respect to any toxic pollutant introduced into such works by an industrial discharger for which pollutant there is no applicable pretreatment requirement in effect, sources introducing waste into such works are in compliance with all applicable pretreatment requirements, the applicant will enforce such requirements, and the applicant has in effect a pretreatment program which, in combination with the treatment of discharges from such works, removes the same amount of such pollutant as would be removed if such works were to apply secondary treatment to discharges and if such works had no pretreatment program with respect to such pollutant;

- To the extent practicable, the applicant has established a schedule of activities designed to eliminate the entrance of toxic pollutants from nonindustrial sources into such treatment works;

- There will be no new or substantially increased discharges from the point source of the pollutant to which the modification applies above that volume of discharge specified in the permit;

- The applicant at the time such modification becomes effective will be discharging effluent which has received at least primary or equivalent treatment and which meets the criteria established under section 304(a)(1) [of the Clean Water Act] after initial mixing in the waters surrounding or adjacent to the point at which such effluent is discharged. (40 CFR Part 125.57)

U.S. EPA's Tentative Decision Document dated November 10, 2005, evaluates the Dischargers' compliance with each of these nine criteria. U.S. EPA's tentative decision is that the Dischargers meet each of the above criteria and the Permit is eligible for reissuance.

3. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings. As discussed in detail in this Fact Sheet, the permitted discharge is consistent with the antidegradation provision of 40 CFR §131.12 and State Water Board Resolution 68-16.

4. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR §122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the

previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in the Order are at least as stringent as the effluent limitations in the previous Order.

5. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires all NPDES permits to specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

   The Dischargers' monitoring program is among the most comprehensive of all municipal ocean discharges of less than 5 MGD in California. More importantly, the monitoring for this permit is thorough, covering the treatment process, receiving waters, seafloor sediment, and marine life. Influent and effluent quality and quantity are routinely monitored to evaluate treatment process efficiency. Effluent is regularly monitored for conventional pollutants (e.g. TSS, pH), as well as whole effluent toxicity and priority pollutants (e.g. arsenic, benzene, halomethanes, etc.).

   Receiving water monitoring includes both surf zone monitoring and ocean monitoring near the discharge. The discharge is approximately 2700 feet offshore. Surf zone monitoring includes grab samples taken on a weekly basis in the summer months and at least monthly during the winter months, at eight monitoring stations, ranging from 5600 feet upcoast of the outfall diffuser, to 5000 feet downcoast of the outfall diffuser. Samples are analyzed for total and fecal coliform organisms to assess conditions for water contact recreation and shellfish harvesting.

   Ocean monitoring stations are located in a target-shaped grid around the outfall diffuser to assess the short- and long-term impacts of the discharge on the receiving water, benthic sediment, and biota in the vicinity of the discharge. Ocean monitoring data are collected quarterly by deploying electronic probes by boat at each monitoring station to measure dissolved oxygen, pH, salinity, temperature, density, and light transmittance at frequent intervals through the entire water column. The data are interpolated to create graphical cross sections of the discharge plume. The cross sections are used to approximate the geometry and behavior of the discharge plume under various oceanographic conditions.

   Sediment monitoring is conducted annually in October at nine stations surrounding the discharge, to assess the temporal (i.e. changes over time) and spatial (i.e. changes in distance from the outfall) occurrence of pollutants in sediment, and physical and chemical quality of the sediments. Parameters that are measured include sediment particle size, BOD_5, sulfides, heavy metals, and persistent organic pollutants (e.g. DDT).

   Bottom-dwelling (or "benthic") organisms are monitored annually in October at the same monitoring stations where sediment monitoring occurs. Benthic community health is represented by indices of density, diversity, trophic index, species, dominance, and richness. Statistical evaluations of these indices are used to assess any changes over time or in distance from the outfall.

Additionally, biosolids and the outfall/diffuser system are inspected annually.

IV. EVALUATION OF COMPLIANCE WITH PERMIT REQUIREMENTS

Whereas U.S. EPA's evaluation is focused on compliance with the nine criteria discussed above, Water Board staff's evaluation is focused on compliance with the Permit's effluent and receiving water limitations; as well as relevant laws and regulations that are specific to California. Staff's evaluation is based on data generated by the Dischargers' Monitoring and Reporting Program.

A. Effluent Limitations.

1. **Total Suspended Solids.** The Permit requires removal of at least 75% of TSS from the influent stream. Additionally, effluent shall not exceed the following limits:

Constituent	Unit	Monthly (30-Day) Average	Maximum At Any Time
TSS	mg/L	70	105
	lbs/day	1203	1804
	kg/day	546	819

The treatment plant was designed to comply with these limitations at an annual average flow of 2.06 MGD. Current influent flows are approximately 55% of the design capacity, thus the long-term average effluent TSS concentration is far below these limitations. However, these limitations were violated on three related occasions during a brief period in 2002. The TSS effluent maximum limit of 105 mg/L was violated on August 26, 2002 (reported value: 107 mg/L), and September 11, 2002 (147 mg/L). The TSS effluent monthly (30-day) average limit of 70 mg/L was exceeded in September 2002 (79 mg/L). The violations resulted from an upset of the biological treatment process, which was later attributed to a distinct alteration of influent characteristics by excessive loading of pH-neutralization chemicals from an industrial laundry facility. The industrial laundry facility discontinued use of the suspect chemicals. Biological treatment performance subsequently improved and the violations ceased. There have been no other violations of effluent TSS limits since 1998.

The Central Coast Water Board issued mandatory penalties totaling $15,000 for these and other effluent violations described below on July 14, 2000 (Mandatory Penalty Order No. 00-100), and November 7, 2003 (Mandatory Penalty Order No. R3-2003-0052).

2. **BOD_5.** The Permit requires removal of at least 30% of BOD_5 from the influent stream. Additionally, effluent shall not exceed the following limits:

Constituent	Unit	Monthly (30-Day) Average	Maximum At Any Time
BOD_5	mg/L	120	180
	lbs/day	2062	3092
	kg/day	936	1404

BOD_5 and TSS are closely correlated. Since the facility is designed to remove 75% of TSS, the facility necessarily removes far greater than 30% of BOD_5. Consequently, these limitations were never exceeded in the life of the existing Permit. The long-term average BOD_5 removal efficiency since 1986 is over 70%, well above the 30% requirement. The long-term average effluent BOD_5 concentration since 1986 is 52 mg/L, well below the 120 and 180 mg/L limitations.

3. **pH.** The Permit requires effluent pH to remain within 6.0 and 9.0 at all times. Effluent pH has been monitored daily since 1993, amounting to over 4,000 measurements. No measurement was below 6.9 or greater than 8.2.

4. **Other Effluent Violations.** In addition to the three effluent TSS violations reported above, the Dischargers violated effluent limitations on five occasions since 1998.

   The TCDD Equivalents (more commonly referred to as 'dioxin') effluent 30-day average limitation of 0.52 pg/L was violated July 10, 2002. The reported dioxin concentration was 0.56 pg/L, 8% greater than the effluent limit. This exceedance was much smaller than the 20% instrumentation calibration standard. The Dischargers state the particular dioxin congener that was responsible for the violation is ubiquitous in the environment. The Dischargers also stated that the violation could be attributed to laboratory contamination, which is commonplace when measuring concentrations at sub-parts-per-quadrillion. Staff has requested the Dischargers sample the influent if any TCDD Equivalents violations occur in the future to determine whether or not any dioxin is formed within the treatment plant.

   The total chlorine residual effluent daily maximum limitation of 1.07 mg/L was violated on April 21, 2000 (3.45 mg/L) and June 30, 2004 (6.3 mg/L). Violations of the effluent instantaneous maximum of 8.04 mg/L occurred December 29, 2002 (10+ mg/L), January 16, 2003 (10+ mg/L), and October 20, 2004 (10+ mg/L). The first two violations occurred when a system that removes solids from the bottom of the chlorine contact chamber broke down and required emergency repair. The chlorine contact chamber had to be drained to complete the repair, hence was unusable. Rather than discharging undisinfected effluent, the Dischargers opted to utilize the outfall pipe as a makeshift chlorine contact chamber, which prevented dechlorination and resulted in the chlorine violation.

   The chlorine violations on December 29, 2002 and January 16, 2003, occurred when a sampling device that controls the chlorine dosing process became clogged with solids from the contact chamber. The clogged device delivered false feedback to the dosing process, which overdosed the contact chamber with chlorine and overwhelmed the dechlorination process. The October 20, 2004 violation occurred when the motor for this same sampling device failed. These problems are quite common in all similar wastewater treatment facilities.

These latest chlorine violations are classified by U.S. EPA as "Significant Non-compliance" (see www.epa.gov/echo), which resulted in temporary listing of the Dischargers on U.S. EPA's Watch List.

The Central Coast Water Board issued mandatory penalties totaling $15,000, for most of these effluent violations on July 14, 2000 (Mandatory Penalty Order No. 00-100), and November 7, 2003 (Mandatory Penalty Order No. R3-2003-0052).

B. Receiving Water Limitations

1. **Bacteria.** The Permit specifies that the discharge shall not cause the following bacterial limits to be exceeded in the water column at all areas where shellfish may be harvested for human consumption:

Parameter Applicable to any 30-day period	Total Coliform Organisms (MPN/100 mL)
Median	70
90% of samples	230

According to staff's analysis of all surf zone total coliform monitoring data, the Dischargers consistently comply with this requirement. Staff analyzed all surf zone total coliform monitoring data collected since 1993. The data set consisted of 385 to 390 samples at each monitoring station. With exception to the monitoring station at the mouth of Morro Creek, the annual median at each monitoring station was well below 70 MPN/100 mL. The greatest median value was 17 MPN at Station F (nearest to Morro Rock) in 1995. With exception to the Morro Creek monitoring station, no less than 98% of samples from each monitoring station were below 230 MPN/100 mL.

The median value at the Morro Creek monitoring station was consistently greater than 70 MPN/100 mL and the "90% of samples" criteria was exceeded in 4 of the last 10 years. However, the Morro Bay/Cayucos wastewater discharge could not be causing these exceedances for two reasons: (1) samples at the Morro Creek monitoring station are taken of the creek prior to flowing into the ocean, where the discharges influence is highly unlikely, and (2) if the discharge were causing the exceedances, then exceedances also would be expected at other monitoring stations in similar proximity to the discharge. As discussed above, this is not the case. This analysis demonstrates that the shoreline near the discharge, with exception to the mouth of Morro Creek, meets the shellfish harvesting receiving water limitation.

Since water contact recreation receiving water limitations are less stringent than shellfish harvesting limitations, this beach also meets water contact receiving water limitations. Independent monitoring supports this conclusion. County of San Luis Obispo Environmental Health Services (EHS) has been monitoring this beach at stations 75 feet north of the Morro Rock parking lot (near Station F), and at the projection of Atascadero Road (near Station E) weekly during summer months since November 2001, and weekly during winter months since February 2002. Heal the Bay's Beach Report Card (see www.healthebay.org/brc/annual/2003/counties/slo/grades.asp), which is based on EHS'

monitoring results, gave both locations an A grade for Summer 2002, an A+ for Winter 2002-2003, and an A+ for Summer 2003.

2. **Light Transmittance.** The Permit specifies that the discharge shall not cause significant reduction in the transmittance of natural light at any point outside the initial dilution zone.

   According to the Tetra Tech's March 1984 *Morro Bay 301(h) Application*, ambient TSS measured in Estero Bay ranges from 20 to 34 mg/L. Assuming the discharged concentration of TSS is 70 mg/L, the expected contribution of TSS to Estero Bay by effluent following dilution is approximately 0.5 mg/L. This would constitute a 1.4% to 2.5% increase in ambient TSS concentrations. Such a small increase is not expected to significantly reduce water clarity.

   The Dischargers have monitored light transmittance at all 16 receiving water-monitoring stations on a quarterly basis since 1998. As a measure of monitoring program's resolution, the monitoring data show statistically significant decreases in light transmittance within the initial dilution zone (which is not a violation of the permit). The data also show occasional minor decreases in light transmittance outside the initial dilution zone. These minor decreases in light transmittance outside the initial dilution zone are caused by entrainment of the more turbid seafloor layer by the buoyant discharge. This phenomenon is not attributed to quality of the effluent and is not controllable, and is not considered a violation.

3. **Dissolved Oxygen.** The Permit specifies that the discharge shall not cause the dissolved oxygen (DO) concentration outside the zone of initial dilution to fall below 5.0 mg/L or to be depressed more than 10 percent from that which occurs naturally.

   Over 1,900 DO measurements were collected at the sixteen regularly sampled receiving water stations during 2002. None were below 5.0 mg/L. The annual average DO concentration at the four stations at the edge of the zone of initial dilution was 7.37 mg/L during 2002. The average DO at the twelve stations outside the zone of initial dilution was only 1% higher at 7.46 mg/L. The discharge has not caused the DO concentration outside the zone of initial dilution to fall below 5.0 mg/L or be depressed more than 10 percent from that which occurs naturally.

4. **pH.** The Permit specifies that the discharge shall not cause the pH outside the zone of initial dilution to be depressed below 7.0, raised above 8.3, or changed more than 0.2 units from that which occurs naturally.

   As discussed above, effluent pH has been measured daily since 1993, amounting to over 4,000 measurements. None were below 6.9 or above 8.2. The long term average effluent pH (7.5) is close to the mean pH of the receiving waters (7.66). The ocean is well-buffered system that is capable of assimilating such small differences in alkalinity. All discharge-related pH anomalies observed by offshore monitoring in the last 4.5 years are listed below. The greatest pH anomaly was 0.12. The pH values associated with the anomalies ranged from 7.21 to 8.28.

Survey Date	Station	Anomaly (pH)	Measured (pH)

Survey Date	Station	Anomaly (pH)	Measured (pH)
4/5/02	9	-0.120	7.944
7/20/01	9	-0.105	7.467
4/15/03	3	-0.103	7.790
4/15/99	3	-0.095	7.212
4/15/03	9	-0.070	7.820
4/2/01	3	-0.047	7.657
7/22/02	9	-0.043	8.283
10/23/02	9	-0.024	7.854
10/23/02	4	-0.011	7.867

This suggests the discharge has not caused the pH outside the zone of initial dilution to be depressed below 7.0, raised above 8.3, or changed more than 0.2 units from that which occurs naturally.

5. **Sulfides in Sediment.** The Permit specifies that the discharge shall not cause the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions.

   To evaluate compliance with this requirement, the Dischargers perform statistical tests on the "null hypothesis," or expected situation, that the mean sulfide concentration within 60 meters of the diffuser structure (nearfield) is not significantly higher than the mean concentration among midfield and reference stations (distant). The test compares the magnitude of the difference in mean sulfide concentrations with the variability about those means. In October 2002, the mean sulfide concentration of nearfield stations was 116 mg/kg and the mean sulfide concentration of distant stations was 65 mg/kg, a 51 mg/kg difference. The p-value was 0.04. P-values less than 0.05 (95% confidence) indicate that the higher nearfield mean sulfide concentration is significant and the null hypothesis may be rejected. This suggests the discharge has caused the dissolved sulfide concentration of waters in and near sediments to be significantly increased above that present under natural conditions.

   The Dischargers contend that despite the apparently significant differences in mean sulfide concentrations, the statistical power to detect the observed differences between the means is relatively low. More specifically, the ability to detect a difference in mean sulfide concentrations of 51 mg/kg is only 54% (Power=0.54). According to the Dischargers' Offshore Monitoring and Reporting Program 2002 Annual Report, "Differences with statistical powers below 0.7 are generally considered indeterminate with respect to the presence of impacts (p. 4-20)." Staff checked the basis for this statement, Jacob Cohen's 1988 Statistical Power Analysis for the Behavioral Sciences, and found it to be accurate.

   Staff requested that the Dischargers investigate ways to increase statistical power. In a January 8, 2004 letter, the Dischargers explained that sediment sulfides concentrations around the outfall have historically been highly variable. Prior to 2001, the Dischargers employed an antiquated technique to measure Dissolved Sulfides in sediment, which yielded highly variable results. In 2001, in an attempt to decrease variability, the Dischargers switched to a more advanced Total Sulfide analysis, which uses acid and heat to strip sulfides out of sediment samples. Unfortunately, Total Sulfide analysis also yielded highly variable results. In October 2002, the Dischargerss developed a technique to extract porewater from the

sediment, in an attempt to obtain a sample that would most accurately measure compliance with the subject requirement. The porewater samples were analyzed for Dissolved Sulfides with a Method Detection Limit of 0.05 mg/L. No Dissolved Sulfides were detected in any samples.

The Dischargers' new porewater extraction technique is the most appropriate technique employed thus far to measure compliance with the subject requirement. The technique measures sulfides that are actually available to benthic organisms. Staff recommends the Dischargers be given the option to monitor Dissolved Sulfide in sediment porewater. The porewater extraction technique is relatively difficult and expensive, so staff further recommends that this monitoring requirement may be discontinued by written approval of the Executive Officer if Dissolved Sulfides are not detected in any porewater sample from any benthic sediment monitoring station for one additional year.

6. **Organic Materials in Sediment.** The Permit establishes sediment quality standards for synthetic organic pollutants ("priority pollutants") by specifying that:

> "The discharge shall not cause the concentration of organic materials in marine sediments to increase above levels which would degrade marine life; and
>
> The discharge shall not cause the concentration in marine sediments of [priority pollutants] to be increased above levels which would degrade indigenous biota."

The Dischargers measure organic materials in sediment by monitoring Total Kjeldahl Nitrogen (TKN), BOD_5, oil & grease, and volatile solids concentrations. For the sake of simplicity, the analysis provided here focuses on volatile solids. The Dischargers have monitored volatile solids at all sediment monitoring stations at least annually since 1986. Figure 1 represents all volatile solids monitoring results. The background sediment monitoring station (Station 1, located 1016 meters upcoast of the discharge) is represented by a deep bold line. If the discharge were causing organic matter in marine sediment to increase, then volatile solids at monitoring stations near the discharge would increase more rapidly than the background monitoring station. Such a condition would be represented by a visible departure of the near-discharge monitoring results from the background monitoring results. As can be seen, this is not the case. All of the near-discharge monitoring results with exception to one (Station 4 in October 2000) fall within the 95% confidence interval of the background monitoring station. This suggests the discharge is not causing organic materials in sediments to increase.

These receiving water limitations are intended to protect marine life. Compliance with these requirements is not based solely on concentrations of organic-loading parameters in sediment. Compliance determinations must take into account the health of marine communities in the vicinity of the discharge.

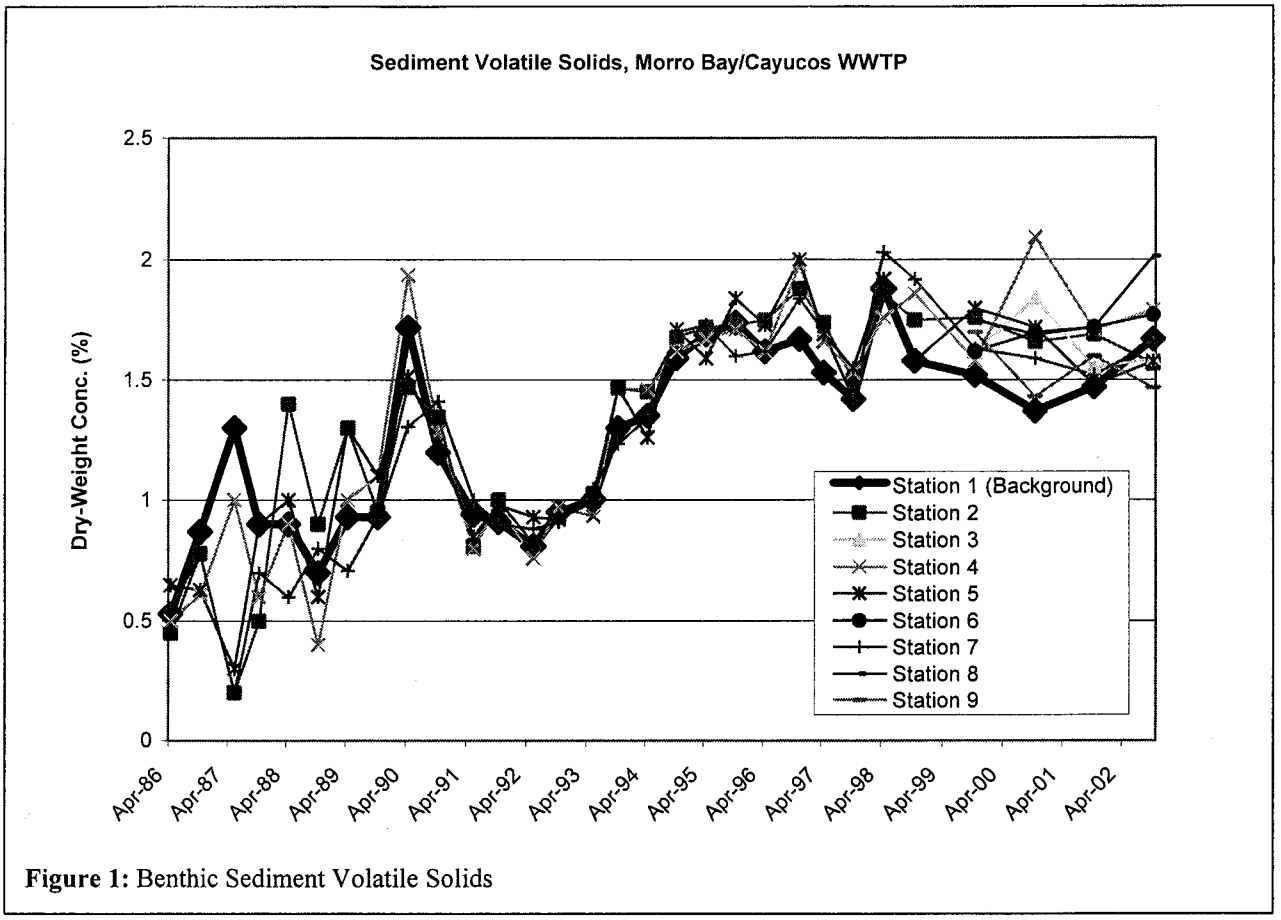


Figure 1: Benthic Sediment Volatile Solids

7. **Marine Life.** The Permit states "the discharge shall not cause degradation of marine communities, including vertebrate, invertebrate, and plant species."

   According to the 2001 California Ocean Plan:

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

   The Dischargers have measured the health of the benthic (bottom-dwelling) community of marine life in the vicinity of the discharge since 1986. Benthic community samples collected at each monitoring station are represented by indices of abundance, diversity, richness, and trophic (feeding) structure. Figure 2 provides a succinct record of all these indices since 1986.

In simple terms, benthic community degradation would be characterized by:

- Greater fluctuations in organism density at stations closer to the discharge,
- Decreased number of species and diversity over time and in closer proximity to the discharge,
- Increased dominance over time and at stations in closer proximity to the discharge, and
- A trophic index less than 58.

Significant differences between areas near and distant from the discharge would be illustrated as a visible departure of the indices at stations near the outfall (shown in red (lighter), Stations

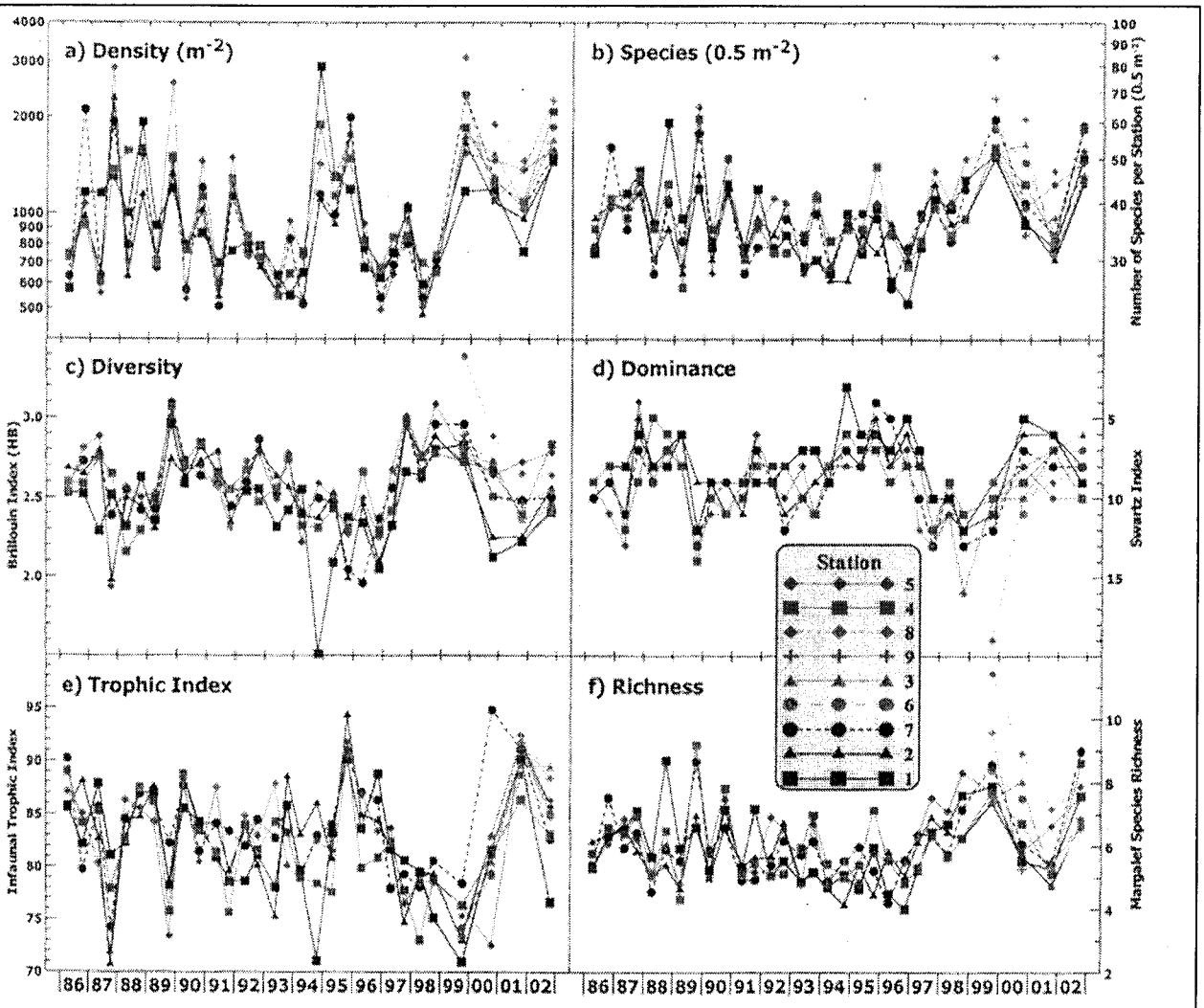


Figure 2: Benthic Community Indices

4 and 5) from the indices at distant stations (shown in black (darker), Stations 1, 2, and 7) in Figure 2.

Figure 2a shows that although density has fluctuated over time, density at all the monitoring stations tended to fluctuate together. The density at stations near the outfall is not consistently higher or lower than density at distant stations. Prior to 1999, benthic community structure was measured both post-summer, as it is currently, and post-winter, when the area of the discharge has been scoured by rough oceanographic conditions. The fluctuations in density data decrease after 1999 when post-winter monitoring was discontinued. This suggests the fluctuations observed prior to 1999 were caused by natural seasonal fluctuations, not degradation of sediment by the discharge.

Figures 2b and 2c show no downward trends in the number or diversity of species that would suggest degradation of the benthic community near the discharge. The numbers and diversity of species in samples collected near the discharge consistently coincides with samples collected distant from the discharge. Interestingly, the numbers and diversity of species were often greatest in samples collected closest to the discharge.

Figure 2d is a record of the Swartz Index of species dominance. The Swartz Index is defined as the number of species accounting for 75% of the individual organisms collected. Consequently, Swartz Index and dominance are inversely related. Degradation of the benthic community would be characterized by decreasing Swartz Index over time and in closer proximity to the discharge. Figure 2d (note the inverted vertical scale) shows no trends that would suggest the benthic community near the discharge has been degraded. Dominance in samples collected near the discharge consistently coincides with samples collected distant from the discharge.

Figure 2e is a record of the Infaunal Trophic Index (ITI). ITI is a measure of the relative dominance of benthic organisms with different feeding behaviors. Benthic organisms are divided into four groups according to their feeding behavior; Group I (suspension feeders), Group II (surface-detritus feeders), Group III (surface deposit feeders), and Group IV (sub-surface detritus feeders). When species in Group I and Group II dominate, ITI values are above 58 and sediments are considered relatively clean. Degradation of the benthic community would appear as a gradual decrease in the ITI at monitoring stations near the discharge relative to stations distant from the discharge. As shown in Figure 8e, the ITI of samples collected near the discharge consistently coincides with samples collected distant from the discharge. The ITI has never been below the critical value of 58 at any station. In fact, the ITI has never dipped below 70. These observations suggest the benthic community has not been degraded by the discharge.

In many of the above instances, the nearfield (60 meters or less from the discharge point) benthic monitoring stations yielded more favorable results than the "reference" Station No. 1 (1016 meters upcoast of the discharge point). This is contrary to what is expected by such a monitoring design. This suggests Benthic Monitoring Station No. 1 is located in a much different environment than the discharge, and does not accurately represent background conditions. U.S. EPA staff, the Dischargers, and Central Coast Water Board staff met to discuss this issue in April 2004, and all agreed that Station No. 1 detracted from the power of the monitoring program to detect spatial and temporal trends in benthic sediment measurements and community health. Station Nos. 2 and 7, which are 150 meters upcoast and downcoast of the discharge point, respectively, are close enough to the discharge to assure

they are in a comparable environment, yet far enough from the discharge to be considered representative of background conditions. Staff therefore recommends Station Nos. 2 and 7 replace Station No. 1 as the reference stations.

8. **Toxoplasma and Sea Otters.** In April 2002, an association of scientists, including those from UC Davis School of Veterinary Medicine, California Department of Fish and Game, Central Coast Water Board staff Karen Worcester, and Dave Paradies, published "Coastal freshwater runoff is a risk factor for Toxoplasma gondii infection of southern sea otters" in the International Journal for Parasitology. The study documented extensive infection of southern sea otters along the Central Coast by Toxoplasma gondii, a protozoan parasite known to originate in land-based mammals, primarily felines. The scientists theorize that sea otters become infected by T. gondii by consuming shellfish, which are filter feeders and accumulate microorganisms such as T. gondii in their tissue. More than 220 live and dead sea otters were examined between 1997 and 2001, with the goal of identifying spatial clusters and risk factors for T. gondii infection. The study found:

   "Spatial analysis of pooled live and dead otter serological data revealed a large cluster of *T. gondii*-seropositive [i.e., infected] otters (20/23, or 87% seropositive) within a 20 km coastal region centered on the towns of Morro Bay and Cayucos, California. Otters sampled from the area were nearly twice as likely to be seropositive to *T. gondii* as expected, and this difference was statistically significant (P = 0.082)."

   The study evaluated the cluster of high infection rates around Morro Bay and Cayucos to determine whether other risk factors could explain the cluster. The study found:

   "...significantly increased odds of *T. gondii* seropositivity were detected for otters sampled near maximal (heavy) freshwater outfalls. Based on our analysis, the odds of *T. gondii* seropositivity were highest for adult male sea otters samples from areas of central California with maximal freshwater outflow, especially those sampled near Morro Bay/Cayucos. No significant associations with *T. gondii* seropositivity were found in relation to sewage flow, either by univariate analysis or by logistic regression analysis. However, 96% of our otter samples (214/223) were obtained from coastal areas with minimal values for municipal sewage exposure."

   Although the study suggests the high rate of infections are most closely associated with heavy freshwater outflow (the second highest rate of infection was centered around Elkhorn Slough, a freshwater outflow similar in magnitude to Morro Bay), staff is concerned that the highest infection rates are centered around the only discharge with a 301(h)-modified permit in the studied area. Scientists have speculated that flushable cat litter may be a source of *T. gondii* in domestic wastewater. In March 2003, staff requested the Dischargers evaluate their discharge as a potential source of *T. gondii*. The Dischargers collaborated with the UC Davis School of Veterinary Medicine to monitor the discharge by hanging clusters of mussels from buoys at each end of the outfall diffuser. Any *T. gondii* present in the discharge will accumulate in the mussels over time. According to a December 13, 2004 letter from Dr. Patricia Conrad of the UC Davis School of Veterinary Medicine:

> "We were able to complete testing of 120 mussels that had been outplanted at the Morro Bay outfall buoy (30 mussels each in the early dry season, late dry season, early wet season, and late wet season). *Toxoplasma* RNA was not detected in any of the 120 mussels from the outfall buoy that have been tested thus far."

These results suggest that the subject discharge is not a source of *T. gondii* loading to Estero Bay.

C. Sewage Spills.

Since 1998, the following sewage spills from the Dischargers respective collection systems were reported:

City of Morro Bay:

Date	Volume (gal)	Cause	Reach Surface Waters?
Sept. 24, 1998	<100	Failure of bypass during sewer line repair	Yes, Morro Bay
Feb. 19, 1999	Unknown	Blockage in main	No
July 16, 1999	1,000	Blockage in main	Yes, Morro Bay
Nov. 23, 1999	150	Rocks and concrete blockage in main	No
Feb. 7, 2001	Unknown	Pipe failure due to corrosion	Yes, Morro Bay
July 4, 2000	100	Cause unknown	No
Oct. 7, 2000	300	Blockage in main	Yes, Morro Bay
Oct. 15, 2000	1,000	Blockage in main	No
Nov. 2, 2000	750	Blockage in main	Yes (50 gal.), Morro Bay
Feb. 14, 2002	500-800	Line failure during pump station repair	Yes, Pacific Ocean
Dec. 22, 2002	300	Blockage in main	Unknown
Jan. 20, 2003	200	Root blockage in main	No
Jan. 22, 2003	250	Grease blockage in main	No
Oct. 22, 2003	300-350	Blockage in main	No
April 30, 2004	100-200	Unknown	Unknown
July 6, 2004	70	Flushmeter in Group Camp restroom stuck on	Yes, Morro Bay
December 31, 2004	8,400	Morro Creek overflowed banks; flooded wet well and sludge drying beds	Yes, Pacific Ocean
February 18, 2005	135	Surcharged manhole due to excessive inflow from heavy rainfall	No

Cayucos Sanitary District:

Date	Volume (gal)	Cause	Reach Surface Waters?
Feb. 13, 2000	760	System surcharged due to heavy rains	Yes, Pacific Ocean
Dec. 23, 2003	200	Blockage in main	Yes, Cayucos Creek
April 18, 2005	300-400	Power generator failure	Yes, Pacific Ocean

In general, the Dischargers responded to each sewage spill appropriately; the spill was quickly contained, the cause of the spill was eliminated, the affected area was cleaned up and disinfected, proper authorities were notified, creeks and/or beaches were posted if necessary, and maintenance/replacement schedules were adjusted if necessary to prevent future problems.

Commensurate with several other recently reissued NPDES permits in the Central Coast Region, the proposed Permit requires the Dischargers to develop and implement Sewer System Management Plans by February 10, 2008. The goal of the Sewer System Management Plan is to

decrease and prevent sewage spills. The elements of the Management Plan include development of the organization and legal authority necessary to implement the Management Plan adoption of specific measures and activities to reduce spills, development of design and performance standards; development of a Spill Response Plan, a Source Control Program, a System Evaluation and Capacity Assurance Plan; and development of a monitoring program to measure the effectiveness of the Management Plan. The Elements of the Sewer System Management Plan are detailed in Attachment G.

Likewise, several sewage spill reporting specifications are added to the MRP. These specifications are intended to provide clear instructions that will lead to more consistent and accurate spill reporting.

V. SUMMARY AND RATIONALE OF PROPOSED CHANGES TO PERMIT REQUIREMENTS

Change	Section	Reason
1. The following prohibition is added: "The discharge of chlorine or any other toxic substance used for disinfection and cleanup of sewage overflows, to any surface water body is prohibited. This prohibition does not apply to the chlorine in the potable water used for final wash down and clean up of overflows."	Permit, Section III.D	To minimize impacts to water quality resulting from cleanup of sewage spills.
2. Effluent limitations for the following constituents are lower than the existing Permit: thallium, chlorodibromomethane, 1,2-dichloroethane, 1,1-dichloroethylene, dichlorobromomethane, isophorone, N-nitrosodi-N-propylamine, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,1,2-trichloroethane, 2,4,6-trichlorophenol.	Permit, Section IV.C	Water Quality Objectives for these constituents have decreased in the 2001 Ocean Plan.
3. The existing Acute Toxicity limitations (1.5 TUa 30-Day Average, 2.0 TUa 7-Day Average, and TUa 2.5 Daily Maximum) are replaced with a 4.3 TUa Daily Maximum.	Permit, Section IV.C	The 2001 Ocean Plan specifies a Daily Maximum Acute Toxicity Water Quality Objective of 0.3 TUa, to which a dilution credit of 10% of the minimum initial dilution ration is applied.
4. Biosolids requirements are added.	Permit, Section VI.C.2	40 CFR 122.44(b)(2) requires each NPDES permit to include standards for sewage sludge use or disposal. Biosolids requirements language was provided by U.S. EPA Region IX's Biosolids Coordinator.
5. Wastewater collection system requirements are added, including a requirement to develop a Wastewater Collection System Management Plan by February 10, 2008.	Permit, Section VI.C.2 and Attachment G	See "Sewage Spills" above.
6. Influent flow metering is required, rather than effluent flow metering.	Monitoring and Reporting Program, Section III	Due to the configuration of the treatment plant equipment, the existing effluent flow meter is not sufficiently accurate for compliance purposes. A comparison of actual effluent flow data to influent flow data suggests the effluent flow meter overestimates actual flow by approximately 25%. The newer influent flow meter is more accurate and reliable

Change	Section	Reason
		than the effluent flow meter, therefore is more appropriate for compliance purposes.
7. Effluent Acute Toxicity monitoring frequency is decreased from quarterly to semi-annually.	Monitoring and Reporting Program, Section IV	The Dischargers have never exceeded its acute toxicity limitation. This performance justifies this monitoring frequency reduction. Note that acute toxicity monitoring is optional in the 2001 Ocean Plan for discharges with this initial dilution ratio.
8. Effluent monitoring frequency for several priority pollutants is decreased from semi-annually to annually.	Monitoring and Reporting Program, Section IV	Quantitative statistical analysis of a large number of historical contaminant measurements demonstrates that there is a low potential for non-compliance, and that the proposed effluent-monitoring reductions are warranted. This historical performance, and the cost of the monitoring justify the monitoring frequency reductions.
9. Surf zone samples are now required to be analyzed for Enterococcus in addition to Total and Fecal Coliform.	Monitoring and Reporting Program, Section VI.A	The 2001 Ocean Plan specifies that Enterococcus shall be monitored at all stations where Total and Fecal Coliform is required, to support development of an Enterococcus standard.
10. Vertical profiling of receiving water for light transmissivity, dissolved oxygen, pH, salinity, and temperature is reduced from 17 individual stations to 6 stations along an along-shore transect. A tow survey is now required. More specifically: "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."	Monitoring and Reporting Program, Section VI.A	Vertical profiles are not capable of defining the limited lateral extent of the effluent plume. Surveys with towed instrumentation will better assess compliance and effectiveness of the diffuser structure.
11. The Dischargers are given the option to monitor dissolved sulfide in sediment porewater, rather than dissolved sulfide in an acid/heat digested sample. The porewater extraction technique is difficult and expensive, so this monitoring requirement may be discontinued by written approval of the Executive Officer if dissolved sulfides are not detected in any porewater sample from any benthic sediment monitoring station for one additional monitoring event (in addition to the October 2003 event).	Monitoring and Reporting Program, Section VII	Please see "Sulfides in Sediment" above.

Change	Section	Reason
12. Benthic Monitoring Station Nos. 2 and 7 replace Station No. 1 as the reference station.	Monitoring and Reporting Program, Section VII	Please see "Marine Life" above.
13. The frequency of benthic sediment monitoring for Nonchlorinated Phenolics, Chlorinated Phenolics, Aldrin, Dieldrin, Chlordane, DDT, DDE, DDD, Endrin, PAHs, PCBs, and Toxaphene is reduced from annually to once in the life of the Permit (2006).	Monitoring and Reporting Program, Section VII.A	These compounds have never been detected in benthic sediment samples and are rarely if ever detected in effluent samples. When detected in effluent samples, they are detected at extremely low concentrations, which are not likely to accumulate in benthic sediments.
14. Annual monitoring reports are required to be submitted by April 1st of each year, rather than March 1st.	Monitoring and Reporting Program, Section X.B	The Dischargers are currently required to submit several different monitoring reports simultaneously by March 1, therefore have requested an additional month to prepare and submit the annual report.
15. Several sewage spill reporting specifications are added.	Monitoring and Reporting Program, Section X.B	1) To provide clear instructions that will lead to more consistent and accurate spill reporting; and 2) to increase the Dischargers' accountability, which should lead to fewer preventable sewage spills in the future.

Note that staff may propose additional changes as a result of public comments. Such changes will be discussed in the Comments and Responses section of the Staff Report for this item.

VI. PUBLIC PARTICIPATION

The Central Coast Water Board and U.S. EPA are considering reissuance of a National Pollutant Discharge Elimination System (NPDES) permit for Morro Bay/Cayucos Wastewater Treatment Plant. As a step in the NPDES permit reissuance process, the Central Coast Water Board staff has developed a Draft NPDES Permit. The Central Coast Water Board and U.S. EPA encourage public participation in the NPDES Permit reissuance process.

A. Notification of Interested Parties

The Central Coast Water Board and U.S. EPA notified the Dischargers and interested parties of its intent to reissue this NPDES Permit and provided them with an opportunity to submit their written comments and recommendations. Notification was provided through publication in the San Luis Obispo County Tribune on December 19, 2005, and through direct mailing of the Draft NPDES permit to the following known interested parties. Written comments were due February 3, 2006.

- Bruce Keogh and Bruce Ambo, City of Morro Bay
- Bonnie Connelly, Cayucos Sanitary District
- Mark Delaplane, California Coastal Commission
- Doug Coats, Marine Research Specialists
- Anjali Jaiswal, Natural Resources Defense Council
- ECOSLO

- Babak Naficy, Coastal Alliance
- Joshua Borger, Environmental Law Foundation
- Hillary Hauser, Heal the Ocean
- Peter Hernandez
- Rebecca Barclay

B. Written Comments and Responses

Comment 1: **Erin Stetzer** of Pacific Grove, **Stephanie Sayler** of Salinas, **Glenn Wolfson** of Pacific Grove, **Lynn Harkins** of Cambria, and **Elissa Wagner** of Aptos, each sent the following identical email to Central Coast Water Board staff on January 5, 2006:

> "I am writing to express my dissatisfaction with the proposed timeline and the lack of protective measures for marine life in the Morro Bay/Cayucos Wastewater Treatment Plant upgrade plan. While I am encouraged by the plan to upgrade the plant to full secondary treatment standards, the proposed timeline of nine and a half years is unnecessarily long. The plan should also contain innovative disinfection measures to protect the marine life in Morro Bay.
>
> "These upgrades are long overdue. The Clean Water Act was passed back in 1972, and this sewage treatment plant is one of the last in California to be upgraded to national standards. Additionally, since the plant discharges wastewater less than a mile from shore and directly in the habitat of sea otters, it is critical that these upgrades occur as quickly as possible.
>
> "Wastewater treatment plants across California, and of varying sizes, have been able to upgrade their facilities on shorter timelines. I urge you to reject the proposed timeline and demand the upgrades be done as fast as possible. The plan should also promote human health and a healthy marine environment by including technologies to eliminate harmful bacteria and pathogens from the wastewater. While secondary treatment is a step above current operations, I urge you to adopt a plan that includes advanced technology to prevent pollutants from entering the ocean.
>
> "Thank you for considering my comments."

Staff Response 1: For several reasons discussed under *Settlement Agreement* above, staff disagrees that the proposed timeline is unnecessarily long. The facts that the Facility discharges less than a mile from shore and into the habitat of sea otters, and that other plants have upgraded faster, standing alone, do not necessitate that the Facility be upgraded "as quickly as possible." Rather, we must consider applicable law and the effects of the discharge on the marine environment and specific regulations. As discussed above and in staff's Evaluation of Compliance with Permit Requirements, there is no evidence that the discharge has adversely affected marine life or impaired beach water quality. There is little justification to require the Facility to be upgraded any faster than proposed.

Disinfection technologies will be determined through facilities planning, environmental review and permitting, and design, which are required tasks of the Settlement Agreement. Disinfection technologies must be carefully considered in conjunction with other treatment

processes, which is not possible at this time, because those treatment processes are not known. If bacteria and pathogens are ever found to be harming marine life, the Central Coast Water Board will require appropriate treatment. Specification of disinfection technology in the Settlement Agreement is inappropriate. Staff recommends adoption of the Permit as proposed.

Comment 2: Central Coast Water Board staff received the following identical email from **2200+ people from across the nation** throughout January 2006, in response to a **Natural Resource Defense Council (NRDC)** Action Alert:

"Dear Water Quality Board Members:

"I urge you to improve the 9.5-year upgrade timeline now proposed by the Morro Bay/Cayucos sewage treatment plant. The Clean Water Act and state law require that this sewage plant shorten the proposed upgrade timeline so that it is as rapid as possible. Moreover, it is critical that specific measures be included in the sewage plant's permit assuring that it will protect the California sea otter.

"There is no reason that the Morro Bay community cannot meet the standard established by many similar small cities around California that have accomplished a similar upgrade in a fraction of the time. Adopting a shorter timeframe for the plant upgrade and requiring measures to protect the sea otter and other marine life are the only ways to preserve local waters, including Morro Bay's extraordinary estuary, for future generations. I am counting on you to take the necessary steps to protect these valuable coastal resources."

Staff Response 2: The Clean Water Act and state law do not require the upgrade timeline to be as "rapid as possible," as this email suggests. The Clean Water Act requires that the discharge meet the requirements for a 301(h) modification, and upgrade to full secondary treatment as quickly as possible if the discharge fails to meet the 301(h) requirements. U.S. EPA has tentatively decided that the discharge meets those requirements. State and federal law require the discharge to comply with the Permit. As discussed in staff's Evaluation of Compliance with Permit Requirements, the discharge complies with the Permit.

There is no evidence that the discharge has adversely impacted the California sea otter. The existing Permit already includes multiple requirements to protect marine life. Staff disagrees that it is "critical that specific measures be included in the sewage plant's permit assuring that it will protect the California sea otter."

Simply comparing the Conversion Schedule of the proposed Settlement Agreement to upgrades of other small cities' facilities around California (or elsewhere) is inappropriate. No upgrade is the same. The circumstances and prior planning leading to those upgrades are different. In this case, the Dischargers have agreed to upgrade in order to avoid litigation regarding the 301(h) waiver and permit delays. Considering the time required to retain engineering consultants, plan the facilities, go through environmental review and permitting, obtain financing, design, and construct the project, the proposed Conversion Schedule is reasonable. The City of Morro Bay is interested in upgrading to tertiary treatment in order to institute water recycling. City representatives have indicated that they expect environmental review of tertiary treatment and recycling options will delay the environmental review. Staff

agrees. Although some consideration of tertiary treatment as a project alternative will be required in any case, more extensive review will be necessary if tertiary treatment will be included in the proposed project. It is important to note that the proposed Conversion Schedule is the maximum time allowed to upgrade, and that any delay by the Dischargers results in stipulated penalties. There is plenty of incentive for the Dischargers to complete the upgrade in less than 9.5 years. We understand that the Dischargers are currently a year ahead of the schedule in the settlement agreement, so a shorter completion time is possible.

Comment 3: Central Coast Water Board staff received the following identical email from **110+ people from across the nation** throughout January and February 2006, in response to a **Defenders of Wildlife** member action alert:

"As a supporter of Defenders of Wildlife and the California sea otter, I urge you to shorten the proposed Morro Bay sewage treatment plant upgrade timeline so that it is as rapid as possible. The proposed 9.5 years to upgrade this plant is too long. Moreover, it is critical that specific measures be included in the sewage plant's permit assuring that it will protect the nearshore marine ecosystem, one of whose key inhabitants is the California sea otter.

"There is no reason that the Morro Bay community cannot meet the standard established by many similar small cities around California that have completed a similar upgrade in a fraction of the time. Adopting a shorter timeframe for the plant upgrade and requiring measures to protect the sea otter and other marine life is the only way to preserve local waters, including Morro Bay's extraordinary estuary, for future generations. I am counting on you to take the necessary steps to protect these valuable coastal resources."

Staff Response 3: Please see staff's previous responses.

Comment 4: **Ruth Boysen** of San Pedro, California, submitted the following email on January 9, 2006:

"As the owner of property in Pismo Beach and a frequent visitor to the Central Coast I want to urge you to lessen the requested 9.5 year timeline by the Morro Bay/Cayucos sewage treatment plant. It is my understanding that state law and The Clean Water Act require that this sewage plant be upgraded as rapidly as possible!

"There is no reason that the community of Morro Bay cannot meet the standard established by other small cities around California that have managed to complete a similar upgrade in a fraction of the time.

"Specific measures should also be included in the sewage plant's permit specifically protecting the California sea otter. Completing the upgrade in a much shorter time and requiring measures to protect the sea otter and other marine life will preserve local waters for our grandchildren and all future generations.

"If you don't want to do this for the future generations then consider that tourism is one of the major industries on the Central Coast. Tourists come to see the creatures they aren't able to see near their homes. It was [sic] seem economically unwise to put off the upgrade

and therefore protecting the wildlife thereby destroying one of the major attractions to the beautiful Central Coast.

"I hope I can count on you to take the necessary steps to protect these valuable coastal resources."

Staff Response 4: Please see staff's previous responses.

Comment 5: Matthew Haskett of Turlock, California, submitted the following email on January 9, 2005:

"Please do not allow the sewage plan that threatens the sea otters to take 10 years to ugrade its facilities. Water quality needs to be improved as soon as possible; 10 years is too long."

Staff Response 5: Please see staff's previous responses.

The **City of Morro Bay** submitted extensive written comments on behalf of the Dischargers on January 11, 2006. These comments are included here verbatim (without footnotes, for the sake of readability). Staff responses follow each specific comment.

Introductory (General) Comments:

"Despite our extensive detailed comments on the permit itself, we are immensely gratified by the cooperative effort between the staffs of Morro Bay, Cayucos, RWQCB, and the EPA throughout the permit process. Because of our mutual interest in a future upgrade of the treatment plant, development of the permit was an unusually long and involved process. The staffs of the four agencies should be applauded for promptly and effectively negotiating a mutually acceptable settlement agreement that identifies a reasonable conversion schedule for plant upgrades capable of meeting full secondary treatment requirements. All agency staffs worked cooperatively to establish the conversion schedule based on facility needs identification and analysis for the two respective communities, extensive public input and dialogue, as well as the best professional judgment of a respected environmental engineering firm. MBCSD is strongly committed to the schedule outlined in the settlement agreement and feels that it accurately reflects a continued commitment to protecting the receiving waters and local ecology. MBCSD looks forward to working with RWQCB and EPA staff during the implementation of the settlement agreement, and to RWQCB assistance in procuring funding for the upgrade project that will be the largest expenditure in the history of either Cayucos or Morro Bay. It is our hope that we can continue to work cooperatively by redirecting much of the monitoring and reporting costs toward our mutually agreed upon solution. MBCSD thanks both RWQCB and EPA staff for their cooperation and patience during this process.

"During the upgrade process, re-issuing a 301(h)-modified discharge permits to MBCSD is an environmentally sound decision supported by two decades of intensive monitoring. During that time, there have been no perceptible impacts from the MBCSD discharge. There are four major aspects of the MBCSD discharge that account for the lack of impacts.

1) Discharge volumes are small, only about 1 MGD;
2) Effluent solids concentrations are low, and close to secondary treatment standards;

3) The discharge is far removed (2700 ft) from the shoreline where the high-energy open-ocean environment rapidly disperses effluent beyond recognition within 50 ft of the diffuser structure; and

4) Effluent contaminant levels are low because domestic wastewater sources dominate in a service area devoid of heavy industry.

"During the upgrade of the MBCSD plant, the Regional Board and EPA decisionmakers can take comfort in the fact that there will be no tangible impact on the marine environment, or its beneficial uses, by allowing the MBCSD to continue operating under a 301(h)-modified permit. The principal reason for this is that this partial-secondary treatment plant is far below capacity, so nearly all of the effluent is already treated to secondary levels. In addition, the discharge will not materially change during the upgrade period because population growth in the service area is restricted by legislation. Consequently, the discharge volume will remain far below plant capacity and nearly all of the wastewater will continue to be treated to secondary levels. In addition, the intensive monitoring required as part of the 301(h) section of the Clean Water Act is "...among the most comprehensive of all municipal ocean discharges of less than 5 MGD in California." Consequently, the monitoring program will continue to be capable of quickly identifying any potential future impacts so that corrective action can be implemented in a timely fashion. Because of all these considerations, the Regional Board and EPA can rest assured that their decision to re-issue the 301(h)-modified permit to the MBCSD is based on sound reasoning and solid scientific data.

"Your consideration and reasoned response to the MBCSD's concerns [below] are greatly appreciated."

Staff Response: Comment noted.

Note: Dr. Douglas Coats or Marine Research Specialists, consultant the Dischargers, provides the following recommended technical revisions (Comments 6-25).

Comment 6: "...recommended revisions are listed in order of importance, with the highest priority changes listed first. References to pertinent page numbers and sections in the proposed NPDES permit are italicized.

"Remove the requirement for Acute Toxicity Testing [*Page E-10, Section E.A*]. There is no technical or regulatory justification for requiring acute toxicity testing of MBCSD effluent. As stated in the fact sheet [*Page F-22, Section F.V.7*], the California Ocean Plan (COP) does not require acute toxicity tests for dischargers that achieve the dilutions achieved by the MBCSD discharge. The COP cites the need for acute toxicity testing only "*...as necessary for the protection of beneficial uses of ocean waters.*" There is no nexus between the protection of beneficial uses and the requirement for acute bioassays on MBCSD effluent samples. There are four reasons for this:

a) Acute testing is unnecessarily redundant with the chronic testing that is already required as part of the NPDES Permit. Chronic tests provide far more accurate and sensitive measures of effluent toxicity.

b) Acute tests conducted on MBCSD effluent result in erroneous measures of toxicity that provide no insight into the actual toxicity of the discharge. Over two decades of acute testing have demonstrated that the presence of ammonia in the MBCSD effluent samples severely compromises the accurate determination of acute toxicity.

c) Although ammonia interference causes the measurements to be significantly inflated, the acute toxicity levels of the MBCSD discharge reported over the last two decades have been less than half of the effluent limitation cited in the NPDES Permit. Consequently, even based on artificially inflated bioassay results, the discharge cannot be considered an acutely toxic threat to beneficial uses of receiving waters.

d) The acute toxicity limit is intended to prevent lethality to organisms passing through the acute mixing zone. For the MBCSD discharge, the prescribed mixing zone is highly localized around the outfall, extending only 1.5 m (4.9 ft) from the point of discharge. At that location, the effluent is diluted more than 100-fold, and is 25 times more dilute than the effluent tested in the bioassays. The only conceivable beneficial use that could be impacted would be fishing. However, finfish are likely to avoid the turbulent discharge jet. Additionally, acute bioassays continuously expose organisms to high effluent concentrations over a four-day period. Clearly, they do not reflect the brief duration of any potential finfish exposure to dilute concentrations of MBCSD effluent."

Staff Response 6: Staff agrees that chronic toxicity testing is a more sensitive and accurate measure of whole effluent toxicity than acute toxicity. Acute toxicity testing is fraught with problems, including interference by ammonia. The 2001 California Ocean Plan recognizes this, in stating:

"Dischargers shall conduct chronic toxicity testing for ocean waste discharges with minimum initial dilution factors ranging from 100:1 to 350:1. The RWQCBs may require that acute toxicity testing be conducted in addition to chronic as necessary for the protection of beneficial uses of ocean waters."

In this case, with an initial dilution of 133:1, chronic toxicity testing provides adequate protection of beneficial uses. Acute toxicity testing is unnecessary. Staff recommends removal of the acute toxicity-testing requirement from the Monitoring and Reporting Program. The daily maximum Acute Toxicity effluent limitation of 3.9 TUa remains in the Permit.

Comment 7: "Require surfzone sampling only when effluent coliform densities are elevated [*Page E-13, Section E.VI.A*]. The proposed NPDES Permit requires the collection and analysis of surfzone samples on a periodic basis. Instead, surfzone sampling should only be required when effluent total coliform bacteria tests exceed 2,400 MPN/100 mL. Once triggered, surfzone sampling should continue on a daily basis until the effluent total coliform concentration returns to compliance. The rationale often proposed for periodic surfzone sampling in other NPDES permits is that "*Surf-zone monitoring provides a public service....*" However, this rationale does not apply to the MBCSD discharge because it is in direct conflict with the Clean Water Act (40 CFR 125.63a), which requires that the scope of 301(h) monitoring programs be "*...limited to include only those scientific investigations which are necessary to study the effects of the proposed discharge.*" Triggered surfzone monitoring

satisfies this requirement; regular periodic monitoring, as currently specified in the proposed NPDES Permit, does not. Two decades of monitoring data demonstrate that periodic surfzone monitoring does not lend insight into the MBCSD discharge for the following reasons:

a) Disinfection of effluent prior to discharge is highly effective at reducing bacterial densities to levels below the limits established for beneficial use. Thus, at the end of the treatment process, the effluent already typically meets the bacterial standards for ocean waters. Because of this, the EPA Tentative Decision Document states that "*...shoreline contamination by way of the applicant's discharge is not of reasonable concern.*"

b) Rapid dilution of effluent by more than 133-fold shortly after discharge reduces even moderately high bacterial densities to non-detectable levels within a few meters of the discharge point. Clearly, surfzone samples are too distant from the discharge to lend any insight into potential discharge-related impacts from anything but the very highest bacterial densities in the effluent.

c) In contrast to bacterial densities in effluent samples, surfzone samples are often elevated due to onshore runoff. This and other non-point source contamination severely compromises any determination of the potential influence from the effluent discharge.

d) The periodic surfzone monitoring effort specified in the NPDES Permit duplicates sampling already conducted by the San Luis Obispo County Department of Health."

Staff Response 7: The Discharger's reasons for reducing surfzone monitoring are valid. The Discharger consistently complies with its effluent and receiving water bacteria requirements. The Permit specifies that the discharge shall not cause the following bacterial limits to be exceeded in the water column:

Parameter Applicable to any 30-day period	Total Coliform Organisms (MPN/100 mL)
Median	70
90% of samples	230

Staff analyzed all surf zone total coliform monitoring data collected since 1993. The data set consisted of 385 to 390 samples at each monitoring station. With the exception of the monitoring station at the mouth of Morro Creek, the annual median at each monitoring station was well below 70 MPN/100 mL. The greatest median value was 17 MPN at Station F (nearest to Morro Rock) in 1995. With the exception of the Morro Creek monitoring station, no less than 98% of samples from each monitoring station were below 230 MPN/100 mL. County of San Luis Obispo Environmental Health Services has been monitoring this beach at stations 75 feet north of the Morro Rock parking lot (near Station F), and at the projection of Atascadero Road (near Station E) weekly during summer months since November 2001, and weekly during winter months since February 2002. Heal the Bay's Beach Report Card (see www.healthebay.org/brc/annual/2003/counties/slo/grades.asp), which is based on EHS' monitoring results, gave both locations an A grade for Summer 2002, an A+ for Winter 2002-

2003, and an A+ for Summer 2003. The Discharger's periodic surfzone monitoring is redundant with EHS' beach monitoring program. Reductions in surfzone monitoring are justified.

Since the original purpose of the surfzone monitoring requirement is to ensure that the discharge is not causing exceedances of receiving water bacteria requirements, and periodic monitoring demonstrates that the normal discharge is not causing exceedances, staff believes that triggered surf-zone monitoring, based on exceedances of the Total Coliform effluent limitation, is appropriate. Staff proposes the following change to the surfzone monitoring section of the Monitoring and Reporting Program:

> "Grab samples shall be taken at all surf-zone monitoring stations ~~weekly during summer months (May October) and at least monthly during winter months (November April)~~ 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 U.S. EPA may require daily surf-zone monitoring to continue beyond 4 days if deemed necessary to determine compliance with receiving water limitations."

This triggered surfzone monitoring requirement is more protective of beneficial uses than periodic monitoring because it is more focused on determining compliance when receiving water exceedances are likely to occur. This triggered monitoring requirement is consistent with other similar discharges in the Central Coast Region (e.g., Carmel Area Wastewater District). San Luis Obispo County Environmental Health Department will fulfill the role of periodic monitoring by monitoring this beach weekly during summer months and monthly during winter months

Comment 8: "Remove all statements that imply past exceedances of permit limits are somehow related to less-than-secondary treatment standards. [*Page F-11 and F-12, Section F.IV.A.4*]. None of the specious relationships between treatment levels and violations outlined in the Fact Sheet of the NPDES Permit are based on fact.

a) The record of violations associated with other treatment plants within the region shows that there is no relationship between permit violations and treatment level. In fact, plants that attain full secondary or even tertiary treatment levels have more than ten-times the number of violations of the MBCSD plant in the past five years.

b) The MBCSD effluent often meets or exceeds secondary treatment standards, so it is misleading to suggest that the limited reduction in the suspended solids concentration achieved by conversion to full secondary treatment would suddenly eliminate all future exceedances of permit limits. Instead, the exceedances largely occur because of unavoidable mechanical malfunctions of equipment. In place of these specious arguments, it is reasonable to suggest that many years from now, when the major components of the treatment process approach the end of their useful life, an increase in permit exceedances might be expected.

c) The discussions associated with the exceedances erroneously imply that occasional non-compliance with the effluent limitations in the NPDES Permit is the only consideration for

the permit renewal. In fact, the ability to routinely meet water-quality standards promulgated in the California Ocean Plan (COP) is the primary consideration. The intensive monitoring associated with the MBCSD discharge has consistently demonstrated that the discharge regularly achieves the required receiving-water standards, yet, there is no mention of this fact in the Fact Sheet.

d) The following erroneous statements concerning the exceedances require correction for the reasons indicated:

i) [***Page F-11, Section F.IV.A.4***] "*The reported dioxin concentration ~~value~~ was 0.56 pg/L, 8% greater than the effluent limit. This exceedance was much smaller than the 20% instrumentation calibration standard. The Dischargers state the particular dioxin congener that was responsible for the violation is ubiquitous in the environment ~~and was present in the influent to the treatment plant~~. The Dischargers also stated that the violation could be attributed to laboratory contamination, which is commonplace when measuring concentrations at sub-parts-per-quadrillion. ~~Staff suspects the dioxin could have been formed in the disinfection process of the treatment plant, where a relatively high concentration of organic matter is combined with a high dose of chlorine.~~*" The last statement is incorrect because neither the solids concentration nor the chlorine dose at the time of the dioxin measurement was particularly high relative to other effluent samples, when dioxin measurements were well below the permit limit. The Fact Sheet fails to point out the fact that the excess 8% is well below the 20% resolution of the chemical assay. Finally, the MBCSD never stated that the dioxin was present in the influent, although this is a plausible assumption given that drinking water is also often chlorinated.

ii) [***Page F-11, Section F.IV.A.4***] "*~~Notably, this violation might not have occurred had the facility been designed to meet secondary treatment standards, because a solids removal system in the chlorine contact chamber would not likely be necessary.~~*" This statement is incorrect because the solids removal system in the chlorine contact chamber has nothing to do with secondary treatment. Instead, it has to do with the fundamental redesign of facility in 1985. Certainly, a new facility could be designed so that solids would not accumulate in a tank that was originally designed as a clarifier, but that could be accomplished without achieving secondary treatment. Even so, solids would accumulate somewhere in the process. Conversely, even if the suspended solids concentrations were to meet full secondary treatment standards, which the effluent has for 17 of the last 23 months, solids would continue to settle in the contact tank.

iii) [***Page F-12, Section F.IV.A.4***] "*~~Again, these violations might not have occurred had the facility been designed to meet secondary treatment standards, because solids would not be present in the chlorine contact chamber at levels that would alter the chlorine dosing process. (Similar problems have not occurred at facility's that meet secondary treatment standards.)~~*" Again, this statement is blatantly incorrect. The violation was caused by the design of the sampling device that controlled the chlorination/dechlorination process, and had nothing to do with the suspended-solids load. The sample-supply line was subsequently redesigned to improve flow and filter screens are now cleaned more often. These changes eliminated the sampling problem and chlorine violations have not occurred since. According to representatives from other treatment plants, identical sampling devices at full-secondary and tertiary facilities require the same type of maintenance regimen."

Staff Response 8: Upon reviewing the Fact Sheet again, staff believes the subject statements were somewhat speculative and unnecessary, and agrees to the recommended changes.

Comment 9: "Remove cross-shore benthic monitoring stations B-8 and B-9 [*Page E-3, Section E.II*] and add replicate sampling for composite chemical analyses at the remaining stations [*Page E-14, Section E.VII.A*]. The locations of cross-shore Stations B-8 and B-9 are shown in the figure on the next page, [but not included here]. These stations were added in the last permit but were subsequently found to be heavily influenced by natural depth gradients. The depth-related differences at these stations mask potential discharge-related impacts and render the data at these stations of little use. In exchange for the reduced monitoring effort at these cross-shore stations, the grab sample replication should be increased at the remaining (along-shore) stations. Variability in trace-metal concentrations significantly increased after replicate grab sampling was dropped in the current permit's monitoring program. Consequently, chemical analysis of a composite of three replicate grab samples at Stations B-2 through B-7 should be reinstated to stabilize the determination of chemical concentrations. To implement this requirement, the last sentence in the last paragraph on page E-14 should read: "~~*A grab sample*~~ Three grab samples *shall be collected using a 0.1 m^2 Van Veen grab sampler* ~~*at all benthic monitoring stations, and analyzed*~~ at each benthic monitoring station. A composite of these three samples should be analyzed *as follows:*"

Staff Response 9: Staff agrees that the cross-shore configuration of benthic monitoring stations B-8 and B-9 masks potential discharge-related impacts. B-8 and B-9 are clearly influenced more by depth differences than by the discharge. (If B-8 and B-9 were impacted more by the discharge than depth, then the along-shore stations that are the same distance from the outfall as B-8 and B-9 would exhibit a similar spatial gradient, which is not the case.) Replicate grab-sampling at the along-shore benthic monitoring stations is a fair tradeoff for removal of B-8 and B-9. Staff proposes to include the requested change.

Comment 10: "Footnote the annual minimum frequency of analysis in the effluent monitoring requirements for the protection of human health to state that "*After results are reported, the Discharger may request to the Regional Board and EPA that only those parameters detected during the first year of sampling be analyzed during the remainder of the permit*" [*Pages E-6, E-7, and E-8, Section E.IV.A*]. Adding this footnote is consistent with other 301(h) NPDES discharge permits in the region. Moreover, quantitative analyses of a decade of effluent measurements has definitively demonstrated that the MBCSD discharge has a high compliance potential for the chemical constituents currently monitored on a semi-annual basis. The results from this reasonable potential analysis should be included in the rationale for changes to the effluent monitoring frequency [*Page F-22, Section F.V.8*] as follows: "~~*None of these priority pollutants were detected in effluent by the several sampling events during the life of the existing*~~ Quantitative statistical analysis of a large number of historical contaminant measurements demonstrates that there is a low potential for non-compliance, and that the proposed effluent-monitoring reductions are warranted. *This* historical *performance, and the cost of* ~~*this*~~the *monitoring justifies* the ~~*this*~~ *monitoring* ~~*frequency*~~ *reductions*. ~~*Effluent monitoring for those priority pollutants which were detected during the life of the existing Permit remains the same.*~~"

Staff Response 10: Dischargers always have the right to request monitoring reductions, so the requested footnote is unnecessary. However, for the sake of consistency with other permits, staff agrees to add the footnote as requested. The Discharger should note that staff is not authorized to grant monitoring reductions. The Central Coast Water Board, in addition to U.S. EPA, must approve reductions. Staff also agrees to include the additional rationale for the proposed monitoring frequency reductions.

Comment 11: "Change the minimum sampling frequency for effluent metals from semi-annually to annually [*Page E-5, Section E.IV.A*]. Analysis for effluent metals should conform to the annual sampling frequency required of other priority pollutants. The fact that metals have been detected in past effluent samples does not provide an adequate rationale for the semi-annual sampling frequency. The statement concerning the reductions in monitoring, "*Effluent monitoring for those priority pollutants which were detected during the life of the existing Permit remains the same.*" [*Page F-22, Section F.V.8*] suggests that because a compound has been detected historically, it has a potential for non-compliance. However, such an approach provides no comparison between a concentration that is environmentally significant and the detectable concentration, which is largely a measure of a laboratory's analytical ability. In fact, trace metals differ from other priority pollutants because they occur naturally in the environment at detectable levels. Some are even required by organisms as nutrients. The fact that they occur naturally in the environment should not be a reason to intensify monitoring. On the contrary, the reasonable-potential analyses of historical effluent measurements has definitively demonstrated that the potential for future compliance for metals concentrations is high, and that annual sampling is sufficient to demonstrate continued compliance with the COP."

Staff Response 11: Staff does not accept the Discharger's rationale for reducing effluent monitoring frequency for metals. The metals are occasionally detected in effluent, which justifies more frequent monitoring than the other priority pollutants. The Discharger suggests that staff is intensifying monitoring. This is not the case. The proposed semi-annual effluent monitoring frequency for metals remains the same as the existing permit.

Comment 12: "Reduce the number of initial chronic screening tests from "*...no fewer than three tests*" to "*...no fewer than two tests*" [*Page E-11, Section E.V.B*]. Ostensibly, multiple screening tests are conducted to account for potential effluent variability. However, MBCSD effluent varies semiannually, and requiring more than two semiannual tests is redundant. There is no regulatory basis for the three-test requirement because the COP does not specify the length of an initial screening period for chronic tests. The proposed duration of two tests is reasonable and conforms to the intent of the COP."

Staff Response 12: Staff agrees that an initial screening period of two tests is appropriate. Most similar dischargers in the Central Coast Region are only required to determine the most sensitive species through one screening. Two tests should adequately account for any effluent variability. Staff proposes to accept the change as requested.

**Comment 13: "Replace the seventeen instances of the statement "*The discharge shall not cause...*" with "*Wastewater constituents within the discharge shall not cause:*" [*Pages 15 and 16, Sections V.A, V.B, V.D, V.E, V.F, V.G, V.H, V.I, V.J, V.K, V.L, V.M, V.N, V.O, V.P,*

***V.Q, and V.R*]. This change is consistent with the intent of the COP and is particularly important for the MBCSD discharge because, on occasion, the naturally occurring bottom seawater that is entrained in the buoyant effluent plume has different properties from shallower receiving waters. Receiving-water changes in suspended solids, dissolved oxygen, and other constituents that result from the movement of ambient seawater should be distinguished from those caused by the presence of effluent constituents."

Staff Response 13: The subject discharge is unique in that the offshore monitoring program is powerful enough to distinguish entrainment of a naturally-occurring turbid bottom seawater layer by the buoyant effluent plume from changes resulting from effluent constituents. Staff agrees that movement of seawater should be distinguished from changes caused by the presence of effluent constituents. Staff proposes to accept the change as requested.

Comment 14: "Remove the requirement for testing dissolved-sulfide concentrations in benthic porewater samples [*Page E-15, Section E.VII.A, Line 3 of Sampling-Frequency Table and Footnote 18; Page F-15, Section F.IV.B.5, Last Sentence of the 1st full Paragraph; Page F-22, Section F.V.11*]. The additional year of sampling required in the footnote for elimination of sulfide sampling has already been conducted, and the stated requirement has been met. The MBCSD has performed the high-resolution sulfide analysis on porewater samples on three separate sampling occasions, in 2003, 2004, and 2005. None of the 27 samples contained detectable sulfide concentrations. Moreover, elevated sulfide concentrations in porewater are usually restricted to quiescent marine and estuarine environments, where there are high concentrations of organic constituents. Often these benthic environments are also hypoxic. This is not the case for the coarse sand sediments surrounding the MBCSD outfall, which are intensively reworked by waves and currents."

Staff Response 14: When originally drafting the proposed permit in 2003, staff proposed to give the Discharger the option to monitor Dissolved Sulfide in sediment porewater to decrease variability of results. The porewater extraction technique is relatively difficult and expensive, so staff further proposed that this monitoring requirement may be discontinued by written approval of the Executive Officer if Dissolved Sulfides are not detected in any porewater sample from any benthic sediment monitoring station for one additional year. Since the Discharger has used the porewater extraction technique and not detected any Dissolved Sulfides at any station for two additional years, the Discharger has met this requirement. Staff therefore proposes to remove the requirement for testing Dissolved Sulfides in sediment porewater as requested.

Comment 15: "Revise the locations of the surfzone monitoring stations to conform to historical measurement locations [*Page E-2, Section E.II*]. The coordinates of the surfzone monitoring locations provided in the monitoring-location table in the permit do not coincide with the along-shore distances cited in the same table. Moreover, neither the coordinates nor the along-shore distances coincide with the precise locations where surfzone samples have been collected over the past two decades. These inconsistencies only became known after analysis of detailed navigational data collected during a recent shoreline survey. The revised surfzone monitoring stations should be as follows:

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

Staff Response 15: Staff appreciates the Discharger's attention to these details, and proposes to accept these changes as requested.

Comment 16: "Clarify the requirement that "*Dilution and control water should be obtained from an unaffected area of the receiving waters*" [*Page E-11, Section E.V.B*]. The statement should be modified to specify "*Dilution and control water should be obtained from an unaffected area ~~of the receiving waters~~ of the open ocean along the Pacific coast.*" Otherwise, the statement could be incorrectly interpreted to mean that dilution and control waters used in the chronic bioassays need to be collected from the region around the outfall. That would be an onerous and unnecessary requirement. In contrast to discharges within enclosed bays, the receiving waters of the open ocean are relatively uniform and there is no advantage to collecting seawater near the outfall, as opposed to seawater collected in the open ocean near the toxicity testing facility."

Staff Response 16: Staff agrees, and proposes to accept this change as proposed.

Comment 17: "Focus the discussion of toxoplasma and sea otters [*Page F-19 and F-20, Section F.IV.B.8*]. The discussion provided in the Fact Sheet under Section F.IV.B.8 misrepresents the potential for impacts from the MBCSD discharge, and fails to clearly state, at the beginning of the discussion, the empirical fact that the MBCSD discharge is not responsible for the observed toxoplasmosis in the local sea otter population. In particular, it does not fully discuss the implications of mussel-testing results, which unequivocally demonstrate that the MBCSD discharge cannot be the source of *Toxoplasma gondii* infection in sea otters. The Fact Sheet also fails to point out that the mussel analyses determined that the MBCSD discharge does not contain other bacterial pathogens such as *Campylobacter, Clostridium perfringens, Plesiomonas shigelloides, Salmonella, and Vibrio* spp. (*cholerae, parahaemolyticus*, etc.). Additionally, the Fact Sheet cites research published by Miller et al, but does not discuss the implications of their finding that "*...seropositivity to T. gondii was not significantly associated with ...proximity to sewage outfalls (P=0.955) but was highly correlated with freshwater flow (P<0.001).*" This finding clearly demonstrates both the overwhelming influence of non-point source contamination, and the lack of influence from wastewater discharges. The rest of the toxoplasmosis discussion in this section of the Fact

Sheet is either not pertinent to this NPDES permit, is highly speculative, or has since been proven wrong. Consequently, the last full paragraph on Page F-19 should be eliminated from the Fact Sheet in its entirety. In particular, discussing the details of the high toxoplasmosis infection rates in otters near Morro Bay is unwarranted given that they are unrelated to the discharge. Similarly, discussing early speculation that high infection rates might be related to "*...the only discharge with a 301(h) Waiver in the studied area,*" is clearly unfounded since, as stated later in the Fact Sheet, "*... the subject discharge is not a source of T. gondii loading to Estero Bay.*""

Staff Response 17: Staff appreciates the Discharger's concern regarding its discussion of toxoplasma and sea otters in the Fact Sheet, but believes the discussion is balanced and complete. Staff does not accept the Discharger's recommended changes.

Comment 18: "**Remove tributyltin as a monitoring constituent [*Page E-6, Section E.IV.A*].** Tributyltin was eliminated from the effluent monitoring program in the current permit because it has never been detected in MBCSD effluent. Also, its use is now restricted within the U.S. and it is not a likely constituent of MBCSD effluent. Instead, its distribution in the marine environment is primarily linked to its use as an anti-fouling additive to bottom paint on large ships, and detectable levels tend to be associated with relict contamination within the seafloor sediments of very large harbors."

Staff Response 18: Staff checked the existing monitoring program and confirmed that effluent tributyltin monitoring is not required. Staff proposes to remove the effluent tributyltin monitoring requirement as requested.

Comment 19: "**Revise the description of the effluent sampling location [*Page E-2 (Section E.II)*].** The effluent sampling location should not coincide with the location of the offshore diffuser structure, as it is currently listed in the NPDES Permit. Instead, effluent samples are collected at the air-relief structure, which is located onshore within the confines of the treatment plant at 35° 22' 47"N, 120° 51' 40"W. This location is downstream of any in-plant return flows or disinfection units, and is the last access point before the wastewater flows into the outfall."

Staff Response 19: Staff agrees that the specified effluent sampling location should be the Facility's air-relief structure, not the offshore diffuser structure. Staff proposes to accept this change as requested.

Comment 20: "**Modify and move the following statement to a footnote on the appropriate constituents: "*The mass based goals determined from the 99th percentile of historical effluent concentrations and a flow of 2.06 MG*" [*Page E-8, Section E.IV.B*].** The statement is unclear as originally written. It should be replaced by "*The performance-based mass emission goal was determined from the 99th percentile of historically detected effluent concentrations, and a flow of 2.06 MGD.*" It should be a footnote on the following nine constituents: arsenic, copper, zinc, total cyanide, toluene, benzene, chloroform, halomethanes, and tetrachloroethene."

Staff Response 20: Staff agrees with this comment and proposes to accept this change as requested.

Comment 21: "Provide a footnote to "*Effluent Limitations*" stating that "*The daily mass emission calculations are based on the average design flow rate of 2.06 million gallons per day (MGD).*" [*Page 11, Section IV.A*]. Normally, mass emissions would be based on the effluent peak seasonal dry weather flow of 2.36 MGD that is stated in Section IV.A. However, in this version of NPDES Permit, the mass emissions are computed from the average design flow rate. This results in more restrictive limitations on mass emissions. This fact should be clarified in a footnote. Otherwise, the computed mass-emission limitations might be thought to be in error."

Staff Response 21: Staff agrees with this comment and proposes to accept this change as requested, except that the footnote is more appropriately added to Section IV.C.5, not Section IV.A.

Comment 22: "Remove the statement concerning the predictive ability of the monitoring and reporting program (MRP) [*Page 6, Section II.K*]. The finding, "*The MRP is not capable of predicting future impacts to water quality and beneficial uses resulting from significant increases in pollutant loading*," is inappropriate and misleading. First, it adds nothing to an assessment of the MRP based on its intended use because "*...significant increases in pollutant loading*" are not proposed as part of this permit. Second, it is misleading because the intensive and well-designed monitoring program is capable of detecting small increases in pollutant loading, and is capable of detecting potential discharge-related impacts regardless of their cause. In accordance with its intent, the MRP acts as a sentinel for untoward influences from the discharge, thereby allowing timely implementation of corrective actions that limit potential "*...future impacts to water quality and beneficial uses....*""

Staff Response 22: Staff agrees this finding is somewhat misleading, and proposes to replace it with the following, taken from the MRP:

> "The MRP 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."

Comment 23: "Qualify the discussion of Total Suspended Solids (TSS) exceedances [*Page F-10, Section F.IV.A.1*]. As written, the statement concerning the TSS exceedances imply they are a regular occurrence. This is not the case, and the following statement should be qualified as indicated: "*...thus the long-term average effluent TSS concentration is far below these limitations. However, these limitations were violated on three* related *occasions* during a brief period in 2002. S~~s~~*ince 1998*, there have been no other exceedances of the TSS limit.""

Staff Response 23: Staff did not intend to imply that effluent TSS violations are a regular occurrence. Staff proposes to accept these minor changes to the Fact Sheet as requested.

Comment 24: "Augment the statement concerning biosolids in the facility description [*Page F-3, Section F.II.A*]. The biosolids statement should be augmented to read: "Historically, b~~B~~*iosolids* have been~~are~~ *anaerobically digested and dried, composted, and then trucked to the San Joaquin Valley for use as a soil conditioner*. However, in the past two years, the MBCSD has successfully implemented a composting operation at the treatment plant that will allow beneficial reuse of biosolids locally."

Staff Response 24: Staff proposes to accept this change as requested.

Comment 25: "Remove the two-sentence preamble to the section on Receiving Water Limitations [*Page 15, Section V*]. In its current form, the statement is ambiguous and unnecessary. It states, "*Receiving water quality is a result of many factors, some unrelated to the discharge. This permit considers these factors and is designed to minimize the influence of the discharge to* [on] *the receiving water*." This statement ambiguously implies that the permit considered factors unrelated to the discharge to minimize its influence. The statement adds nothing to the rationale for receiving-water limitations."

Staff Response 25: Historically, this statement has been included in most discharge permits in the Central Coast Region to protect dischargers from receiving water quality factors that are beyond the discharger's control. Staff agrees the statement "this permit considers..." is ambiguous. Since the Discharger's monitoring program is powerful enough to discern between discharge-related impacts and receiving water factors beyond its control, staff also agrees this statement is unnecessary. Staff therefore proposes to remove this statement as requested.

Note: The following comments were provided by the Discharger's staff, and were titled as "Recommended Corrections to Typographical Errors, and other Inaccuracies and Discrepancies." Only the more significant comments are included here. The very minor clerical corrections recommended by the Dischargers that are not included here were made as recommended.

Comment 26: "Use consistent and accurate terminology when referring to the 301(h)-modified NPDES discharge permit issued to the MBCSD. The only accurate descriptor of the permit or its requirements is "*modified.*" The Clean Water Act only uses the term "*modified*" in its description of Section 301(h). It never uses other terms that are commonly misapplied to the Act, such as "*variance*" and "*waiver.*" These other terms are misnomers, because Section 301(h) only modifies three of the secondary treatment requirements and all other secondary treatment standards still apply. Use of the term "*waived*" gives the misleading impression that secondary treatment requirements are eliminated altogether. All instances where these misnomers are used in the draft MBCSD permit should be changed to use the term "*modified*"...[comments then specify all sections of the draft where "modified" should be used instead of "variance" or "waiver."]

Staff Response 26: *"Modified"* is the terminology used in the Clean Water Act, therefore staff has revised the permit to only use *"modified,"* not *"variance"* or *"waiver."*

Comment 27: "**Use consistent and accurate terminology when referring to the MBCSD as the "***Permittee*" or "*MBCSD*," not the "*Discharger*." This change implicitly acknowledges that the MBCSD, like the Regional Board, as a branch of government providing a valuable public service to its constituents. The term "*Discharger*" connotes that nothing of value is being achieved by the MBCSD's treatment and subsequent discharge of municipal wastewater. Specifically, modify the first sentence of Section II.A on Page 4 as follows: "*Background. The City of Morro Bay and Cayucos Sanitary District (hereinafter* MBCSD~~*Dischargers)*~~...," and modify the subsequent references to "*discharger*" accordingly."

Staff Response 27: Staff acknowledges that the City of Morro Bay and Cayucos Sanitary District provide a valuable service to its constituents. Staff disagrees that the term *"Discharger"* connotes that it achieves nothing of value. *"Discharger"* is a term used in Clean Water Act and the California Water Code and the term the Water Boards typically use to refer to all persons discharging waste pursuant to waste discharge requirements, including NPDES Dischargers. *"Discharger"* remains used in the permit.

Comment 28: "Correct the Conversion Schedule to conform to the Conversion Schedule contained in the *SETTLEMENT AGREEMENT FOR ISSUANCE OF PERMITS TO AND UPGRADE OF THE MORRO BAY-CAYUCOS WASTEWATER TREATMENT PLANT* that was negotiated by MBCSD and RWQCB staff [*Page 8*]."

Staff Response 28: The Conversion Schedule included in the draft was an old version by the Discharger's consultant Carollo Engineers, and is corrected in the proposed permit, and in this staff report, as requested.

Comment 29: "**Correct the Six-Month Median Effluent Limit for silver to 0.07 mg/L [*Page 12, Section IV.C.2*].** The NPDES Permit incorrectly specifies a limiting concentration for silver as 0.09 mg/L. This concentration does not account for the background concentration of silver in seawater that is specified in the COP."

Staff Response 29: Correction made. Staff appreciates the Dischargers' diligence in pointing out a correction that results in a slightly more stringent limitation.

Comment 30: "**Provide footnote "b" that is associated with the effluent limitations for cyanide [*Page 12, Section IV.C.2*].** The NPDES Permit indicates that cyanide has a footnote "b," but does not provide the footnote. According to the COP, the footnote should read as follows. "*If a discharger can demonstrate to the satisfaction of the Regional Board (subject to EPA approval) that an analytical method is available to reliably distinguish between strongly and weakly complexed cyanide, effluent limitations for cyanide may be met by the combined measurement of free cyanide, simple alkali metal cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR PART 136, as revised May 14, 1999.*""

"**Add a footnote that allows the effluent limitation for chromium (III) to be met as a total chromium limitation [*Page 12, Section IV.C.3*].** This is consistent with footnote #2 applied to hexavalent chromium on Page 11. It is also consistent with the current discharge permit."

Staff Response 30: Staff mistakenly omitted these footnotes from the draft, therefore has added them to the proposed permit, as requested.

Comment 31: "Correct the Average Monthly Effluent Limit for chloroform to 17.4 mg/L [*Page 13, Section IV.C.4*]. The NPDES Permit lists an incorrect limit (1.74 mg/L)."

Staff Response 31: Staff recalculated this chloroform effluent and checked the previous permit, and verified that the limit should be 17.4 mg/L. The chloroform limit is corrected as requested.

Comment 32: "Correct the units on the Six-Month Median Effluent Limit for heptachlor and heptachlor epoxide to ng/L [*Page 13, Section IV.C.4*]. The NPDES Permit specifies heptachlor limiting concentrations that are associated with units of ng/L rather than the units of pg/L, which are incorrectly listed in the NPDES Permit."

Staff Response 32: The heptachlor and heptachlor epoxide limits in the draft permit are correct and remain unchanged. Units of pg/L are more appropriate than units of ng/L, because ng/L requires an inordinate number of significant figures.

Comment 33: "Change the type of sample for chlorinated phenolics from composite to grab [*Page E-5, Section E.IV.A*]. This conforms to the sample type of non-chlorinated phenolic compounds. The sample type for endosulfan, which is the next parameter in the list below non-chlorinated phenolic compounds, should be explicitly spelled out as a 24-hour composite so the continuation marks for compounds listed below it are correct."

"**Change the type of sample for radionuclides from grab to composite [*Page E-5, Section E.IV.A*].** This conforms to the historical sample type used to determine radioactivity."

"Change the type of sample for bis(2-chloroisopropyl) ether from grab to composite [*Page E-6, Section E.IV.A*]. This conforms to the sample type of the other related constituents."

Staff Response 33: Staff agrees these corrections are appropriate. Corrections made as requested.

Comment 34: "Change the mass-emission goal for total cyanide to 71 kg/yr [*Page E-8, Section E.IV.B*]. The revision is based on the measurement of a detectable cyanide concentration in July 2000. Because of this detection, it is now one of the nine compounds potentially subject to antidegradation analysis should its mass emission increase above the specified limit.

Change the mass-emission goal for benzene to 12 kg/yr [*Page E-9, Section E.IV.B*]. The revision is based on the measurement of a detectable benzene concentration in July 1999. Because of this detection, it is also one of the nine compounds potentially subject to antidegradation analysis should its mass emission increase above the specified limit.

Change the mass-emission goal for dioxin to 1.48 mg/yr [*Page E-10, Section E.IV.B*]. This is the correct emission based on the permit limit of 0.52 pg/L."

Staff Response 34: Staff checked these numbers and found these changes to be appropriate. Note that these are slight increases in the mass emission goals in the Monitoring and Reporting Program, not the Maximum Allowable Daily Mass Emission Rates. These changes do not constitute backsliding. With exception to dioxin, which is discussed extensively above, detections of these pollutants were not effluent violations. These detections have not resulted in any discernable degradation to receiving water quality or beneficial uses.

Comment 35: Elizabeth Leite of Willow Creek, California, submitted the following comments on January 20, 2006:

> "My husband and I volunteer as instructors and educators at the Marine Mammal Center housed in the Golden Gate National Seashore. We are retired school teachers and have taken extensive training in order to provide instructional programs to visiting groups and individuals. We have learned a great deal about ocean ecology and understand the necessity of maintaining a healthy oceanic ecosystem for the health of marine mammals, fisheries, and human beings. It is from this frame of reference that I urge you to improve the 9.5 year upgrade timeline now proposed by the Morro Bay/Cayucos sewage treatment plant. This timeline needs to proceed as rapidly as possible and it needs to protect the California sea otter, an endangered species. State and federal clean water laws require this.
>
> "As you probably know, we have a serious tragedy developing on our coast. Agricultural runoff, discharges of stormwater, and the outflow from sewage treatment plants are affecting the nearshore environment. Our endangered marine mammal, the sea otter, once gaining in numbers, is struggling again on the central coast. Both domoic acid poisoning and taxoplasmosis are affecting this beautiful animal, and its numbers are going down. These catastrophic maladies are increasing as a result of pollution and bacterial contamination from inefficient sewage treatment. Similarly, an epidemic of leptospirosis last year affected California sea lions in record numbers. Sea lions along the north and central coast were infected. The magnitude of the problem suggests that the ocean is in trouble. California Fish and Game has stated this. (Outdoor California, September-October 2003) The evidence is before us.
>
> "The only way to clean up the central coast is to maintain tough pollution standards. Toxins, herbicides, pesticides, fecal bacteria, and many kinds of contaminants threaten human health. They are obviously affecting the health of marine mammals. Marine mammals are sentinels. They are showing us what is wrong. Please insist on a faster, more efficient upgrade for the Morro Bay. Cayucos sewage plant."

Staff Response 35: Please see staff's response to Comment 2 above. There is no evidence that the discharge has adversely impacted the California sea otter.

Comment 36: Kristen Herald of Wooster, Ohio, submitted the following comments on January 17, 2006:

"It is unreasonable to give the Morro Bay/Cayucos sewage treatment plant almost 10 years (10 years!) to update its facilities to no longer be a threat to the California sea otter. The total population of California sea otters statewide is only a mere 2,700, and declining. The otters act as sentinels, showing the health of the ecosystem around them. They are now dying of infections, depleting an already low population in the state of California. The source has been traced to poor water quality due to contaminants from sewage dumped in the bay by the Morro Bay/Cayucos sewage treatment plant. The sewage contains high levels of bacteria, parasites, pathogens, and fecal bacteria as well as many other harmful pollutants that threaten the lives of marine animals such as a variety of shellfish, seals, dolphins, a multitude of fish species and several shorebird and geese populations, not to mention the otter.

"It has been researched and shown that the update of the treatment plant and its facilities could happen as quickly as two and a half years. Not only is it absolutely possible to be carried out and finished in such a short period of time, but it would also cost less!

"Please, do not let this happen. The sooner the updates to the treatment plant are carried out, the better for all involved. The disturbing quality of the water is not only threatening the California sea otter, but other species that inhabit the waters. Allowing the pollution to continue leads to dangers posed not only to marine life, but also human life and public health, causes degradation of coastal habitats, beach closures, and damage to the local economy.

"I urge you to shorten the period of time given to the sewage treatment plant to upgrade. This has a great effect on helpless animals, and I hope that is taken in to consideration."

Staff Response 36: Please see staff's response to Comment 2 above. There is no evidence that the discharge has adversely impacted the California sea otter.

Comment 37: **E. Joy Oakes** of Los Angeles, California, submitted the following comments on January 20, 2006:

"Please upgrade the timeline to improve the Morro Bay/Cayucos sewage treatment plant, thus protecting the sea otters, other marine life and Moro Bay's famous estuary. I have cancer with no genetic history of the disease and have to believe that environmental hazards are one of the reasons I am so ill. Please do your part to help our planet, your beautiful city and the people and animals that depend on your concern. Thank you."

Staff Response 37: Please see staff's responses to previous comments.

Comment 38: The **City of Morro Bay** submitted additional written comments on February 2, 2006, regarding the new collection system requirements proposed in the draft permit. The comments are included verbatim here (without footnotes, for readability's sake):

"Thank you for this opportunity to submit additional comments on the proposed discharge permit for the Morro Bay - Cayucos (MBCSD) Wastewater Treatment Plant. These comments are based on a comprehensive review of the wastewater collection system

requirements contained in the proposed WDR's, and reflect the input from City of Morro Bay staff only. The Cayucos Sanitary District staff has indicated that they will be submitting comments on the collection system requirements under a separate comment letter.

"City staff requests that the Wastewater Collection System Requirements (Pages 21-23), as well as the Elements of the Wastewater Collection System Management Plan - (Attachment G), be deleted from the proposed WDR for MBCSD. It is City staffs understanding that the State Water Resources Control Board (SWRCB) is scheduled to adopt Statewide General Waste Discharge Requirements for Wastewater Collection System Agencies (State WDR) in March 2006. The SWRCB will not exclude the City and District from the State WDR on the basis that it's operations are covered by specific NPDES Permit provisions. Strict compliance with both regulatory programs will result in duplication of effort and poor use of limited resources. Therefore, we feel that to include these new requirements in the permit is redundant and unnecessary and will place additional unnecessary burdens on City staff and the staff of the Regional Board.

"The State WDRs, in their current form, have been developed with extensive stakeholder input that includes large and small collection agencies, consultants, non-governmental organizations, federal agencies, RWQCB staff and SWRCB staff. It was the opinion of the State Sanitary Sewer Overflow Guidance Committee that it was in the best interests of the public to have uniform rules for all collection systems in the State. The State WDRs will provide consistent guidance for all collection system operators in California. Implementation will be uniform and in accordance with reasonable time schedules. It is the opinion of City staff that the State WDRs will achieve the goal of reducing Sanitary Sewer Overflows (SSO) and improving collection system management that is consistent with the collection system requirements presently included in the proposed WDR for MBCSD.

"Given the numerous differences and issues which face each of the two collection systems, and the City and District's record of consistent and appropriate response to preventing and reacting to sewer spills, it makes more sense to hold each system accountable individually under the State WDR that allows for 42 months for implementation of the program as opposed to the 24 months dictated by the WDR for MBCSD. The WDR for MBCSD will be in jeopardy if either one of the systems does not perform to the Regional Boards expectations. Thus, either agency may be punished while having little or no ability to affect needed changes.

"Including collection system management requirements and absolute SSO prohibitions in the WDR for MBCSD will expose the City and its ratepayers to expensive, third party citizen lawsuits for any instance of noncompliance, regardless of circumstances. This is a real threat that must be considered by the RWQCB. The statewide General WDR regulatory process will provide an equivalent level of water quality protection and enhancement, without the same level of exposure to litigation.

"In the event that the Collection System Requirements cited above are not removed from the proposed WDR for MBCSD, then City staff requests that the completion dates for the

tasks outlined in the Wastewater Collection System Management Plan Development Schedule (WCSMP) be modified as follows:

Task	Completion Date
Legal Authority (Part III)	February 10, ~~2007~~ 2008
Measures and Activities (Part IV)	February 10, ~~2007~~ 2008
Overflow Emergency Response Plan (Part VII)	February 10, ~~2007~~ 2008
Design and Performance Provisions (Part V)	June 10, ~~2007~~ 2008
Capacity Evaluation (Part IX)	June 10, ~~2007~~ 2008
Source Control Program (Part VIII)	February 10, ~~2008~~ 2009
Final Wastewater Collection System Management Plan	February 10, ~~2008~~ 2009

"The Management Plan Development Schedule should be modified for the following reasons:

1. The City and District are fully committed to responsible management of their respective collection systems. The City and District currently implement comprehensive, proactive collection system management programs.
2. The excellent compliance record for the two collection systems over the past seven years is contained in the Table cited on page F-20 of the Fact Sheet. The Table demonstrates the City and District's commitment to Best Management Practices and proactive operations and maintenance procedures. Page F-20 of the Fact Sheet provides further evidence of the City and District's commitment to responsible management of their respective collection systems. "*In general, the Dischargers responded to each sewage spill appropriately; the spill was quickly contained, the cause of the spill was eliminated, the affected area was cleaned up and disinfected, proper authorities were notified, creeks and/or beaches were posted if necessary, and maintenance/replacement schedules were adjusted if necessary to prevent future problems.*"
3. The City and District are beginning the complicated task of upgrading the treatment plant per the Conversion Schedule negotiated by the City, District, and RWQCB. This is both an expensive and time-consuming process for City and District staff. Implementing the dates outlined in the existing Management Plan Development Schedule will divert staff time from critical tasks and procedures required in the upgrade process.
4. It should be noted that there are two distinct collection systems involved in this permit process. The point at which the two collection systems are starting from in terms of existing programs and practices are quite different based on the operators and managers first hand knowledge of their systems and the individual needs of the respective systems. Therefore, to establish arbitrary completion dates for Management Plan tasks on a "one size fits all" basis is

unrealistic and does not provide sufficient flexibility for the City and District to design and implement a Sewer System Management Plan appropriate to their particular circumstances.

5. After careful review and evaluation, City staff does not believe that it has been allowed adequate time to perform the numerous and varied tasks outlined in Parts III, IV, VII, V, in the one year time frame mandated in the MPDS. The detailed tasks outlined in the WCSMP will require the City to: hire at least one additional full time position in the Collections Division; divert staff time from critical tasks; contract out critical tasks to qualified consultants for implementation in accordance with standard engineering requirements; implement rate fee analysis and increases, and adhere to statutory requirements for public hearing, notice and posting requirements. The tasks cited will be impossible to accomplish in a professional and adequate method in the limited time provided.
6. There is no discussion of the RWQCB review and approval process. Conforming our current collection system management process and its structural elements to satisfy the Attachment G requirements will require significant effort. The City would appreciate some assurance that there will be meaningful review and approval of the WCSMP by the RWQCB in a timely manner.

Additional Comments:
The City has limited ability to control the operation and maintenance activates of some of the satellite collection systems, as they are owned and operated by State agencies. The City has and will continue to take necessary actions to promote Best Management Practices and work with all interested parties to limit SSOs and to protect water quality, however it is unreasonable to hold the City responsible for system failures that occur under the jurisdiction of other agencies.

Page E-20, D. Sewage Spill Reporting, 4:
The requirement to collect "*upstream, at, and downstream*" samples subsequent to a SSO is ambiguous for several reasons. In the opinion of City staff, upstream monitoring should only be required when the discharge is to a creek, stream, or similar open, accessible channel with continuous background flow. If the SSO is to a non-flowing waterbody, such as an estuary, pond or the Pacific Ocean, "*upstream*" sampling is not possible. In the case of a discharge to a storm drain, upstream and downstream sampling may be difficult or impossible. Furthermore, entering a storm drain for the purpose of sample collection could expose City staff to unsafe conditions, particularly during rainfall events. It is recommended that this paragraph be modified to clarify SSO monitoring requirements and to fully define "upstream" and "downstream" sampling locations and protocols.

Staff Response 38: The proposed collection system requirements are consistent with those approved in several previously issued NPDES permits and Waste Discharge Requirements. The proposed requirements are appropriate for the Dischargers. The Draft Fact Sheet (December 5, 2005) for the proposed statewide Waste Discharge Requirements states, "In order to provide a consistent and effective SSO prevention program, as well as to develop reasonable expectations for collection system management, these General [statewide] WDRs

should be the primary regulatory mechanism to regulate public collection systems." Staff would prefer to rely on the pending statewide requirements, but there is still considerable uncertainty as to when those requirements will be approved by State Board. At its February 2006, State Board delayed adoption of the requirements. Staff therefore recommends the proposed collection system requirements be retained. However, the requirements should terminate when the Discharger enrolls under the statewide requirements, therefore staff recommends addition of the following language to the beginning of Permit Section C.3:

> "The requirements of this section, including Attachment G, shall terminate when the Discharger obtains coverage under statewide General Waste Discharge Requirements for Sewage Collection System Agencies."

The Discharger's requested changes to the Wastewater Collection System Management Plan development schedule are consistent with the proposed statewide requirements. A revised schedule would allow time for adoption of the statewide General WDRs, and for the Dischargers to enroll under the General WDRs, which should address the Discharger's concerns about duplicating effort. Staff recommends acceptance of these changes.

Staff understands that the Discharger has limited ability to control satellite collection systems, and agrees it is unreasonable to hold the City responsible for system failures that occur under the jurisdiction of other agencies.

Staff agrees the draft requirement to collect "upstream, at, and downstream" samples subsequent to a sewage spill is ambiguous. Staff agrees that upstream monitoring should only be required when the discharge is to a creek, stream, or similar open, accessible channel with continuous background flow, and has made this change to the proposed Permit.

Comment 39: The **Cayucos Sanitary District** submitted written comments on February 2, 2006, regarding the new collection system requirements in the proposed permit. The comments were submitted separately from the City of Morro Bay because Cayucos Sanitary District operates a separate and distinct wastewater collection system. The comments are included verbatim here:

> "The Cayucos Sanitary District (District) acknowledges that the Elements of the Wastewater Collection System Management Plan - (Attachment G) (WCSMP) and the Wastewater Collection System Requirements (Pages 21-23) included in the proposed WDR are consistent with other NPDES permits recently adopted in the Central Coast RWQCB Region. The District is also aware that these same provisions have been the subject of much comment, and have been even appealed to the SWRCB. The District hereby restates the comments made by other Agencies, that prescriptive collection system management requirements should not be included as wastewater treatment/disposal NPDES Permit provisions. The City of Morro Bay (City) and the District are entirely separate and distinct public agencies that operate and maintain completely separate and distinct sewer collection systems; and therefore WDR for the two collection systems should likewise be separate, which will be more equitable for the District and City and will likely be more efficient for purposes of regulatory monitoring and enforcement. The District's recommendation is that

the Wastewater Collection System Requirements section, as well as Attachment G, and Section E-20: Part D, #'s 4 and 6 be removed from the proposed WDR.

In the event that the Collection System Requirements are not removed from the proposed WDR, then the District requests that the completion dates for the tasks outlined in the Management Plan Development Schedule be modified as follows:

Task	Completion Date
Legal Authority (Part III)	24 months after adoption of the NPDES Permit
Measures and Activities (Part IV)	24 months after adoption of the NPDES Permit
Overflow Emergency Response Plan (Part VII)	15 months after adoption of the NPDES Permit
Design and Performance Provisions (Part V)	36 months after adoption of the NPDES Permit
Capacity Evaluation (Part IX)	36 months after adoption of the NPDES Permit
Source Control Program (Part VIII)	24 months after adoption of the NPDES Permit
Final Wastewater Collection System Management Plan	42 months after adoption of the NPDES Permit

The Management Plan Development Schedule should be modified for the following reasons:

1. The District recommends that the Task Descriptions and Completion Dates comport with the Tasks shown on Page 15 (of 19) of Draft Order No. 2006-? for the Statewide General WDR for Sewage Collection Agencies.
2. The District is fully committed to responsible management of its collection system. The District currently implements comprehensive, proactive collection system management programs.
3. The excellent compliance record for the District's collection system over the past seven years is contained in the Table cited on page F-20 of the Permit Fact Sheet. The Table demonstrates the District's commitment to Best Management Practices and proactive operations and maintenance.
4. The point from which the City and District collection systems are starting are very different in terms of current condition and the status of existing programs and practices from which to address the requirements of the Management Plan. To establish arbitrary completion dates for Management Plan tasks on a "one size fits all" basis is unrealistic and doesn't address the realities the two agencies face in terms of their ability to comply with the Management Plan Development Schedule.
5. Given the numerous differences and issues which face each of the two collection systems, and the City's and District's records of consistent and appropriate response to preventing and reacting to sewer spills, it makes more sense to hold each system accountable individually under the proposed Draft

Statewide WDR Sewer System Management Plan Time Schedule that allows for 42 months as opposed to the proposed 24 months dictated by this permit.

6. The City and District are commencing the complicated task of upgrading their jointly-owned wastewater treatment plant, in accordance with a Conversion Schedule negotiated with the RWQCB staff, pending adoption by the RWQCB of a Settlement Agreement. This is an expensive and time consuming process for a very small District staff. Implementing the activities and tasks by the corresponding completion dates outlined in the existing Management Plan Development Schedule (MPDS) will divert staff time from critical tasks and procedures attendant to the upgrade process.

7. After careful review and evaluation, the District contends that as provided for in the Permit, there will not be adequate time to perform the numerous and varied tasks outlined within the time frame mandated in the MPDS. Depending on the nature of the tasks outlined in the WCSMP, the District will be required to divert staff time from critical collection system operations and maintenance tasks in order to recruit, hire, and train qualified staff. Additionally, the District envisions there will need to be outsourcing of critical tasks areas where professional consultants' services are required such as when standard engineering requirements are involved, and to conduct rate fee analysis and studies, and to adhere to statutory requirements for public hearing, notice and posting requirements. The tasks cited will be virtually impossible to accomplish in a professional and adequate manner within the limited time provided.

While the District understands and supports the concept of a regulatory framework for collection systems that is intended to reduce SSOs and protect water quality, we do not believe that prescriptive collection system management requirements should be included as NPDES Permit provisions. Again, we recommend that this entire section, as well as Attachment G, be removed from the Tentative Order. The basis for this recommendation is outlined below:

1. The SWRCB is in the final stage of adoption of Statewide General Waste Discharge Requirements for Sewage Collection System Agencies (General WDRs).

2. The SWRCB estimates the General WDRs will be adopted in March of 2006. This timing will basically coincide with adoption of MBCSD's final NPDES Permit.

3. The General WDRs, in their current form, have been developed with extensive stakeholder input from large and small collection agencies, consultants, non-governmental organizations, federal agencies, RWQCB staff and SWRCB staff. In sharp contrast, the Wastewater Collection System Requirements set forth in the Tentative Order were developed without any input from the regulated community.

4. Including collection system management requirements and absolute SSO prohibitions in the Tentative Order will expose the District (and City) and its

ratepayers to expensive, third party citizen lawsuits for any instance of noncompliance, regardless of circumstances. This is a real threat that must be considered by the RWQCB. The statewide General WDR regulatory process will provide an equivalent level of water quality protection and enhancement, without the same level of exposure to litigation.

5. The General WDRs will provide a level playing field for all collection system operators in California. Implementation will be uniform and in accordance with reasonable time schedules. Again, implementation under the statewide General WDR will allow the District to implement the required tasks in accordance with standard engineering requirements.

6. A key element of the statewide General WDR program is a standardized online (web-based) reporting system. This application will streamline and dramatically reduce costs associated with SSO reporting at all levels. If the collection system provisions of the Tentative Order are retained, the District will be subject to duplicative, expensive, and burdensome reporting requirements. The SWRCB will not exclude the District from the General WDR on the basis that its operations are covered by specific NPDES Permit provisions. Strict compliance with both regulatory programs will result in duplication of effort and poor use of already strained District resources.

Attachment G . – Elements of the Wastewater Collection System Management Plan

The wastewater collection system provisions of the Tentative Order require the City and District to prepare a Wastewater Collection System Management Plan in accordance with Attachment G. The City and District's comments on Attachment G are provided below:

1. The District is in the process of implementing required Wastewater Collection System Management Plan (WCSMP) elements. Redevelopment, repackaging, and related compilation efforts to satisfy the Attachment G requirements will require substantial outlay of resources and funding that could be better used to maintain and/or improve the District's collection system.

2. The District also questions the annual update requirements for many of the plan elements. For example, a very limited number of new connections are made within the District's service area each year. Annual updates of a Capacity Assurance Plan are not appropriate and would be of very little practical value to the District, the public or the RWQCB. This and similar efforts would divert staff time from critical maintenance, rehabilitation and upgrade activities.

3. There is no discussion of the RWQCB review and approval process. Conforming our current collection system management process and its structural elements to satisfy the Attachment G requirements will require significant expenditures of limited District resources. If not removed the District would appreciate some assurance that there will be meaningful review and approval of the WCSMP by the RWQCB in a timely manner.

Page E-20, D. Sewage Spill Reporting, 4:

The requirement to collect "upstream, at, and downstream" samples subsequent to a SSO is ambiguous for several reasons. In the opinion of the District, upstream monitoring should only be required when the discharge is to a creek, stream, or similar open, accessible channel with continuous background flow. If the SSO is to a non-flowing water body, such as an estuary, pond or the Pacific Ocean, "upstream" sampling is not possible. In the case of a discharge to a storm drain, upstream and downstream sampling may be difficult or impossible. Furthermore, entering a storm drain for the purpose of sample collection could expose District staff to unsafe conditions, particularly during rainfall events. It is recommended that this paragraph be modified to clarify SSO monitoring requirements and to fully define "upstream" and "downstream" sampling locations and protocols."

Staff Response 39: Please see staff's response to the previous comments from the City of Morro Bay. The Wastewater Collection System Management Plan development schedule proposed here by Cayucos Sanitary District is reasonable for both entities; therefore staff recommends acceptance of the schedule proposed by Cayucos Sanitary District.

Comment 40: The **Natural Resources Defense Council (NRDC)** submitted a 69-page comment letter on February 3, 2006, entitled *Time is of the Essence: The Legal and Technical Reasons Why EPA and the Regional Board Must Deny the 301(h) Waiver and Require Upgrade of the Morro Bay-Cayucos Sewage Plant "As Fast As Possible.* The comments are too lengthy to include verbatim here, so only summary portion of the document is included verbatim here. The entire comment letter is included as an attachment to the Staff Report.

"In the past decade, waivers from basic federal treatment requirements under section 301(h) of the Clean Water Act have become increasingly rare in the United States, and with good reason. The discharge of partially treated waste degrades receiving waters, and poses serious risks to public health and the marine ecosystem. For that reason, sewage treatment plants are not entitled to maintain Clean Water Act section 301(h) waivers from secondary treatment standards merely for their administrative convenience. But at root, if EPA and the Regional Water Quality Control Board issue another waiver to the Morro Bay-Cayucos Sewage Treatment Plant (the "Sewage Plant" or "Plant"), bureaucratic convenience will be the true basis for such an action. Convenience for a discharger of partially treated sewage will come at the cost of the undeniable water quality improvements that secondary treatment provides, improvements that will both diminish risks to the ecosystem and marine life, including the threatened California sea otter, and to public health. Because an upgrade—including one that would include tertiary treatment—can be accomplished feasibly twice as fast as proposed, and because the Plant is not entitled to a waiver from secondary standards, the only appropriate and lawful action is to deny the waiver and order an upgrade "as fast as possible," the operative standard established under law.

There are numerous reasons why this is true.

First, a balanced, indigenous population of marine life does not exist in and around the zone of initial dilution. The presence of a healthy ecosystem is an indispensable prerequisite for issuance of a waiver—even if a waiver applicant proves it has no role in causing identified problems. But, here, the agencies' rote analysis of the evidence ignores a disease epicenter affecting a "sentinel" species—the California sea otter—nearly on top of

the Sewage Plant's discharge pipe. This disease epicenter is the proverbial "elephant in the room" that the agencies inexplicably fail to properly consider in concluding that the Plant has met its heavy burden of proof here. EPA's analysis, and the accompanying assessment by the Regional Board, neither overcomes the mountain of data showing that pathogens have severely degraded the relevant ocean environment nor even persuasively rules out the role of the Plant in causing or contributing to the obvious problem. In fact, the one study relied on by the agencies simply does not rule out the possibility that pathogens—shielded from destruction by the relative inefficiency of the Plant's operation—are causing or contributing to otter morbidity and mortality.

Second, the Sewage Plant has not met its burden to show that it can comply with its existing permit and meet applicable water quality standards consistently. Based on a selective analysis, the Plant asks EPA and the Regional Board to ignore the accumulation of toxic metals around its discharge pipe, acute toxicity caused by chlorine, and the presence of dioxin in plant effluent, as well as other unambiguous violations of applicable standards. Dr. Bruce Bell, one of the leading experts on the operation and upgrade of sewage treatment facilities in the United States, exposes and debunks any contention that the Plant can satisfy section 301(h) requirements in this respect.

Third, recent water quality data, combined with an absence of evidence that the Sewage Plant has employed indispensable and standard tracking and monitoring protocols, preclude the Plant from meeting its burden to show that the discharge supports recreational uses in Estero and Morro Bays. By contrast, a leading expert on pathogenic contamination of recreational ocean waters, Dr. Mark Gold, demonstrates that the Plant's application creates more questions than it answers—while failing to account for recent data that undercuts the fundamental conclusion that the Plant is not degrading beach water quality.

Fourth, and more generally, the Sewage Plant's failure to present a "complete" application with current data and information precludes issuance of another waiver. EPA and the Regional Board have before them an application submitted in 2003 and which, in many instances, relies on even older information. As a result, EPA's and the Regional Board's analyses, findings, and determinations are based on incomplete and stale information. Moreover, the Plant and the agencies have not complied with various consultation requirements that are legally required and substantively germane to the issues. By contrast, throughout our analysis, NRDC identifies and submits current and material information that has been omitted in the record.

Fifth, contrary to the implicit assumption of the agencies, the Plant is highly likely to process additional volumes of effluent in the next five years, a fact which will exacerbate each of the substantive problems that currently plague its operation—including the rate of effective disinfection and water quality standards compliance. The agencies have improperly failed to consider these issues and improperly have concluded that the anti-degradation requirements of the Clean Water Act are met in this instance. This is a glaring failure in light of the fact that waters of national significance are nearby, which deserve the highest level of protection from degradation. It is also a glaring failure in light of the Plant's record of collection system and other spills, which show that even now untreated effluent is reaching local waters due to the outdated nature of the Plant.

Sixth, the upgrade proposed by the Sewage Plant and the Regional Board to improve Plant performance will occur as much as five years later than it feasibly can be accomplished. By contrast, state law requires that remedial actions like that proposed here take place "as fast as possible." This clear mandate has been ignored so far, paving the way for a 9.5 year upgrade schedule that will assure that water quality degradation continues to occur for nearly a full decade.

Seventh, the Draft Permit the agencies propose in the meantime not only waives secondary treatment standards, it also fails to include effluent limits and monitoring for pollutants which have a reasonable potential to cause or contribute to violations of water quality standards. Chief among them is the particular pathogen scientifically linked to otter mortality and morbidity. Given the stakes for an iconic threatened species, one that scientists call a "sentinel" for coastal water quality conditions generally, this omission is indefensible.

Finally, because of all of these issues and additional ones contained in the draft settlement agreement, the settlement document itself fails to meet the standard courts use to determine whether the government is acting consistent with its discretion and in the best interest of the public. While there can be no doubt the upgrade in general furthers that interest, the document fails to require the work on an expedited basis, as is required. Moreover, it otherwise creates the conditions for much longer delays beyond 9.5 years by providing insignificant fines—some smaller than a parking ticket—for many violations of its terms as well as broad, unusual interpretations of standard terms. Collectively, these factors indicate that the agreement may not truly reflect "an arm's length negotiation," which is what courts look for in assessing agreements like the one at issue here.

NRDC wishes it were in a position to fully support the Draft Permit and the upgrade agreement. Since 2003, NRDC has been working to forge a collaborative and cooperative resolution to one of the three remaining 301(h) waivers in California, and the only one so closely associated with a known disease epicenter. Towards this end, NRDC has met with local residents, conservation groups, Regional Board staff, Plant staff, and Joint Powers Agency ("JPA") Board members. This process, which was greatly aided by the perspectives of the Regional Board, and many of its staff, resulted in a JPA Board commitment to upgrade the Plant. However, while positive steps have been taken, given the risks and the evidence, additional commitments are both appropriate and necessary. Section 301(h) waivers are not intended to provide cover for bureaucratic wrangling, nor may they be issued to make meeting bedrock Clean Water Act rules convenient. Since this is the evident function of the proposal to grant the waiver here, EPA and the Regional Board should deny the waiver and require that the Plant upgrade so as to improve water quality "as fast as possible."

Staff Response 40: NRDC's conclusions are largely based on a series of speculative and out-of-context statements regarding sea otter health in the vicinity of the discharge, and are not supported by actual data. As discussed previously, the Discharger has monitored its discharge for the pathogen that is contributing to sea otter mortality in Estero Bay and found none. Actual data are entitled to far more evidentiary weight than unproven hypotheses.

Staff has previously considered every argument that NRDC has presented and found that none of the arguments merit denial of the 301(h)-Modified NPDES permit. U.S. EPA's Tentative Decision Document and staff's Evaluation of Compliance with Permit Requirements, which are based on actual monitoring data from the Discharger's approved monitoring program, both support reissuance of the proposed NPDES permit.

Reissuance of the 301(h)-Modified NPDES permit will effectuate a Settlement Agreement that enforces an upgrade of the Discharger's wastewater treatment plant and will improve discharge quality. Most agree that this is good progress. But NRDC asks for the upgrade timeline to be less than five years, such that the Dischargers may forgo their 301(h)-Modified NPDES permit now, rather than in five years. For several reasons explained previously, upgrading the facility within five years is not possible or necessary, so the Dischargers must seek reissuance of this 301(h)-Modified NPDES permit.

Denial of the proposed Permit would likely result in appeals or litigation that would delay any settlement agreement indefinitely, which may cause the opposite of the intended effect, that is, to further delay the upgrade. Discharger representatives have stated that they will challenge any denial of the 301(h) modification. In addition to litigation delays, the proposed permit would have to be rewritten and a new hearing would have to be noticed, so that some delay would occur even before the Water Board could issue any renewed permit. Whether the 301(h)-modification is eliminated now or in five years (as the settlement agreement provides), discharge quality will not improve until the treatment plant upgrade is complete. That is, the form of permit does not improve the environment, and there is no difference between a 301(h)-modified permit and a full secondary permit with a compliance schedule. The only difference is the length of the schedule. The final compliance date in the schedule is June 23, 2015, i.e., just over nine years. The Dischargers are currently a year ahead of schedule. Staff does not believe a three- to four-year acceleration of the schedule will produce lasting water quality benefits, even assuming that denial of the waiver would accelerate the schedule that much. That being said, in order to issue the proposed Permit, both EPA and the Water Board must find that the Discharger satisfies all elements of Section 301(h).

Following are several specific responses to NRDC's comments. Our overarching recommendation is that the Regional Board and U.S. EPA base its decisions more on actual monitoring data than the speculative and dramatic arguments presented by NRDC. Staff recommends reissuance of the proposed NPDES permit. However, following this response is a discussion of the options available to the Water Board.

- NRDC states "Based on a selective analysis, the Plant asks EPA and the Regional Board to ignore the accumulation of toxic metals around its discharge pipe, acute toxicity caused by chlorine, and the presence of dioxin in plant effluent, as well as other unambiguous violations of applicable standards." Staff did not ignore these matters when formulating its recommendation. The Discharger's dioxin and chlorine effluent violations are discussed extensively in this Fact Sheet. The reference to "accumulation of toxic metals around its discharge pipe" must be qualified by the fact that chromium concentrations in seafloor sediments are increasing throughout the Central Coast, likely due to runoff from abandoned

chromite mines throughout the Region, and effluent monitoring indicates that the Discharge is not contributing to the problem.

- On Page 2, NRDC suggests that reissuance of the proposed 301(h)-Modified NPDES permit be denied because "of the Plant's record of collection system and other spills, which show that even now untreated effluent is reaching local waters due to the nature of the Plant." First, when compared with other areas in the Central Coast Region and State, the Dischargers have an exemplary record of preventing sewage spills. Secondly, sewage spills originate from the collection system and not the treatment plant, and have nothing to do with the issue at hand, which is whether or not to reissue a modification of secondary treatment standards. Nevertheless, we should point out that the proposed Permit includes several provisions to improve operation and maintenance of the Discharger's collection system.

- On Page 2, NRDC argues that State law requires that "remedial actions like that proposed here take place "as fast as possible".

    - Neither the Clean Water Act nor the Porter-Cologne Water Quality Control Act require a five-year upgrade, assuming the plant currently satisfies the 301(h) requirements. The five-year time schedule requirement only applies to upgrades necessary to cure existing permit violations. The mandatory minimum penalty provisions of the Water Code include an exception where the discharger is in compliance with a time schedule that is as rapid as possible, but not longer than five years. (Ca. Wat. Code §13385(j)(3).) If the Board and EPA issue another 301(h)-waiver permit, the Discharger will be in compliance with its permit limits. Since the Discharger would not be in violation of its permit, no cease and desist order under Section 13385 would be necessary to avoid MMPs. On the other hand, if the Board were to find that the plant does not meet the 301(h) requirements, the permit would have to include full secondary treatment limits. In order to shield the plant from MMPs, the Board could issue a time schedule for the upgrade, during which MMPs for violating the secondary treatment requirements would not apply. After five years (or any faster schedule the Board determined to be possible), the Board could no longer shield the plant from MMPs.

    - The NPDES compliance schedule provisions do not apply either. (40 CFR §122.47.) The type of compliance schedule described in the NPDES regulations is in the permit itself, and provides for a delayed effective date of permit limits. This type of compliance schedule cannot extend compliance deadlines beyond "the applicable statutory deadline under the CWA." The applicable statutory deadline for secondary treatment requirements has long passed, except for facilities subject to a 301(h) modification. EPA staff has advised Water Board counsel that EPA will not approve NPDES permits that include compliance schedules for secondary treatment requirements. Even if the Board amended the Basin Plan to allow compliance schedules for new water quality standards, that provision would not apply in this case. There is nothing to suggest that the compliance schedule provision in the NPDES regulations requires *every* plant with a 301(h) modification to upgrade as quickly as possible. That interpretation would eliminate the 301(h) exception to secondary treatment requirements.

- Even where the NPDES compliance schedule provisions apply, both EPA and the State Water Board allow time schedules in excess of the five-year permit term, where appropriate. (*See, e.g., In the Matter of the Review on its Own Motion of Waste Discharge Requirements for the Avon Refinery, et al.* [Tosco] (State Water Board Order No. 2001-0006); Enclosed Bays and Estuaries/Inland Surface Waters Plan §2.1 (compliance schedules may extend up to ten years beyond the Plan's adoption).)

- Other evidence might support a faster time schedule. For example, if the record supports NRDC's argument that the aging treatment plant will become unable even to meet the current effluent limits, this would support requiring a faster upgrade. This is indistinguishable from other failing treatment plants in the Central Coast Region, but it is not related to Section 301(h).

- On Page 2, NRDC states that the Draft permit "fails to include effluent limits and monitoring for pollutants which have a reasonable potential to cause or contribute to violations of water quality standards. Chief among them is the particular pathogen scientifically linked to otter mortality and morbidity." This statement is false. The proposed Permit complies with Clean Water Act requirements (40 CFR §122.44) to include effluent limits for all pollutants with reasonable potential to cause or contribute to water quality standards. The Discharger performed monitoring of its discharge for the presence T. gondii (the only discharger in the State to complete such monitoring), and found none. These monitoring data are the best information available on T. gondii and this discharge. Even if the discharge did have reasonable potential to contain T. gondii, there is no established water quality standard for this specific pathogen. The proposed permit is consistent with the California Ocean Plan in that it already contains effluent limitations for Total Coliform, which is the widely accepted surrogate for pathogens such as T. gondii. Standards are not required where the record contains no evidence from which appropriate standards could be derived, nor does the Ocean Plan require any such standards. (*Petition of Friends of the Sea Otter and Department of Fish and Game,* Order No. WQ 90-1 at 21-22.)

- On Page 12, in summarizing its evidence, NRDC states "Discharge of primary treated sewage is the second most likely factor accounting for the Morro Bay T. gondii hot spot." This statement is taken from a 2002 study that pre-dated the 2003 discharge monitoring study, which demonstrated that the subject discharge does not contain T. gondii. The actual monitoring data relied on by US EPA and Water Board staff clearly outweighs the reports NRDC cites, which pre-date the actual site-specific data. Later in its comments, NRDC argues (incorrectly) that staff bases its recommendation on stale and incomplete information. However, that is what NRDC is doing here.

- On Page 18, NRDC asserts that the proposed settlement agreement should be rejected because it was not "the product of good-faith, arms-length negotiations," or that negotiations were not full of "adversarial vigor." Nothing subjects this type of settlement to the standards governing court approval of consent decrees.[1] The more important

[1] Even when such standards apply, a court must review the settlement in light of the public policy favoring settlement. (*U.S. v. Chevron U.S.A., Inc.*, 380 F. Supp. 2d 1104, 1111 (N.D. Cal. 2005), citing *United States v. Comunidades Unidas Contra*

question is whether the settlement is consistent with applicable law and adequately protective of the environment. Those issues are addressed above. The Dischargers had refused to upgrade just three years ago, but now, after nearly two years of negotiation with staff and pressure from NRDC and the public, the Dischargers have agreed to a multi-million dollar upgrade. The fact that the Discharger originally proposed a 15-year upgrade timeline, but then ultimately agreed to a 9.5 year timeline is evidence enough that the agreement is fair. Staff communicated and met with NRDC representatives numerous times during and after negotiating the agreement. NRDC representatives attended public and private meetings with the Dischargers. The agreement was circulated for public comment for much longer than the 30 days required by NPDES regulations, assuming these regulations even apply to a settlement related to a permitting decision. (40 CFR 123.27(d)(2)(iii).) We received no comments other than NRDC's February 3 comments. The Executive Officer did not sign the agreement before the close of the comment period and thorough review of all comments.

- NRDC criticizes the Settlement Agreement for other reasons:
  - NRDC correctly points out that the administrative civil liability for missing time schedule deadlines are very low. However, this is justified because the Dischargers have agreed not to apply for a second 301(h) waiver. The administrative civil liability in the settlement agreement applies only to violations of the settlement agreement, and not to other permit violations. (Settlement Agreement, §E.4.) If the Dischargers fail to complete the upgrade within five years of issuance of the second permit, they will be subject to Section 13385 administrative civil liability for violating the effluent limits in the permit.[2]
  - NRDC misconstrues the importance of the "clear and convincing evidence" language in the agreement. According to the agreement, the Dischargers waive their right to challenge any interim BOD^5, TSS or pH requirements, or a faster timeline, that are (i) the same as in the current permit, in the case of the effluent limits; or (ii) more stringent and based on clear and convincing evidence. (Settlement Agreement, §§B.2.b, see also, B.2.a.3 and B.2.b.) If the Water Board imposes more stringent requirements that are based on something less than clear and convincing evidence, the only consequence is that the agreement to which NRDC so strenuously objects has no further effect. The Dischargers can challenge the more stringent requirements or shorter time schedule, and the obligation to complete the upgrade in 9-1/2 years (or ever, if the permit is not upheld) is void. The increased evidentiary standard recognizes the uncertainty that the Dischargers face regarding what the second permit will require, since (as NRDC points out) the Board retains all discretion regarding the terms of the second permit.

La Contaminacion, 204 F.3d 275, 280 (1st Cir.2000).) Although the court should not rubber stamp government settlements, its "deference is particularly strong where the decree has been negotiated by the Department of Justice on behalf of an agency like the EPA which is an expert in its field. *United States v. Akzo Coatings of Am., Inc.,* 949 F.2d 1409, 1436 (6th Cir.1991)." (*U.S. v. Chevron* at 1111.) The costs and benefits of the settlement are important. (*Id.* at 1113.) Although the best-case scenario is used as a benchmark to evaluate a settlement, "... it is to be expected that the actual relief secured under the Consent Decree will fall short of the best-case scenario. Such a result may be reasonable result of the compromise inherent in any settlement." (*Id.* at 1114.) It is reasonable to include a compliance schedule that takes into account how long it would have taken to litigate the matter. (*Id.* at 1118.)

[2] Interim effluent limits will be set forth in a time schedule or cease and desist order, or, if the Basin Plan and EPA regulations change, in the permit itself.

- Staff recognized that a settlement agreement is more difficult to enforce than a consent decree. Breach of the settlement agreement requires the Board to bring a breach of contract action, in which it can request the court to order the Dischargers to comply with the agreement. Alternatively, the Board can pursue administrative civil liability. Although the amounts are small during the upgrade process, the goal of any schedule is to ensure the discharger meets the final compliance date. If the Dischargers do not, potential adminstrative civil liabilities become significant unless the agreement is amended,[3] and failure to adhere to a schedule that allowed latitude to the Dischargers would be a factor in setting penalty amounts. That provides a sufficient deterrent effect. In addition, even small administrative civil liabilities signal the community that the upgrade is off-track. Water Board staff, the Dischargers and NRDC have all stated that community support for the upgrade is very strong. The Dischargers will have to account to their constituents for failure to adhere to the schedule.
- Staff, the Dischargers and EPA considered a consent decree in lieu of the agreement that was negotiated. EPA indicated that it cannot participate in a consent decree until permit violations are actually occurring, *i.e.,* if the Dischargers give up the waiver and begin incurring violations of the secondary treatment standards. This would preclude a schedule longer than five years, since the consent decree could not shield the Dischargers from mandatory minimum penalties after that. (Water Code §13385(j)(3).) EPA's internal review requirements would cause significant delay in negotiating a consent decree. The California Attorney General would also have to become involved, and a court approval process would be necessary. In addition, a consent decree is not possible absent the Dischargers' agreement, and they refused to consider this option.

- In Part 3, beginning on Page 20, NRDC argues that the Discharger's application and therefore EPA and Regional Board staff's evaluations are based on stale and incomplete information. Staff's recommendation is not based solely on the Discharger's 2003 permit application, but on the most relevant information available—all monitoring data submitted since 2003. The subject discharge remains essentially unchanged since 2003. Staff also considered all of the most recent sea otter studies when formulating its recommendation to reissue the proposed permit. NRDC bases its conclusions on these same studies while at the same time arguing that such information is stale and incomplete. Staff was prepared to bring the proposed permit to the Regional Board in June 2004, but chose to delay to allow for negotiation of the proposed settlement agreement, partly at the insistence of NRDC. So on the one hand, NRDC argues that the settlement agreement was not adequately negotiated, but on the other hand argues that allowance of time for adequate negotiations is not permissible. These arguments are not valid.

- On page 22, NRDC points out that U.S. Fish & Wildlife Service (USFWS) has not provided an evaluation of the discharge since 1998. The Discharger fulfilled its obligation and properly pursued such an evaluation in 2003. USFWS has not yet provided an evaluation due to its other priorities. The Discharger has again requested such an evaluation from USFWS, and staff understands that USFWS may provide it before the March 24 hearing. Regardless of whether USFWS provides its evaluation prior to the hearing of the proposed permit, the absence of a USFWS evaluation does not merit denial

[3] Of course, even absent an amendment, whether to assess any administrative civil liability beyond MMPs is within the Board's discretion.

of the proposed permit absent evidence of any *substantive* violations, that is, evidence that the discharge may affect sea otters, tidewater goby, steelhead trout, or other listed species in violation of the Endangered Species Act; or that there is a take under the Marine Mammals Protection Act. The outfall area, and the area it impacts, does not include habitat for steelhead or goby. Both species require a freshwater inlet. The closest is Morro Creek, 0.9 mile from the outfall. In addition, the mouth Morro Creek is too dynamic and does not provide the type of protected cove or inlet that goby prefer. The area surrounding the outfall is primarily sandy bottom. Studies of benthic communities are the most appropriate measure of whether any impact is occurring. The USFWS letter can also be obtained after the Board acts, as is the case with Coastal Commission certification of consistency with the Coastal Zone Management Act.

- Throughout Part 3B, beginning on page 22, NRDC suggests that it is the Discharger's burden to prove that the population of every species in Estero Bay is healthy. On page 26, NRDC states that the Discharger should have considered steelhead trout and tidewater goby, species whose critical habitats are fresh or estuarine waters, which clearly could not be affected by the discharge. Any toxic pollutants present in the discharge are most likely bound up in sediments that sink to the seafloor in the vicinity of discharge. Benthic organisms (i.e. those living on or in the seafloor) are the most sensitive receptors to these pollutants. Demersal fish and other higher order organisms move in and out of the discharge area freely and are not practical to monitor for a discharge of this size. This is why benthic monitoring has always been required and not demersal fish monitoring in this case. As discussed extensively previously in this report, twenty years of benthic monitoring data indicate that populations of benthic organisms in the vicinity of the discharge are balanced and healthy.

  This Facility is factually different from the Oxnard 301(h) application discussed in *Rimmon C. Fay,* Order No. WQ 86-17 (regarding the City of Oxnard's treatment plant), for these reasons. In the Oxnard case, EPA concluded that the discharge was likely to have an adverse impact on plankton, and TetraTech concluded it was impossible to tell. EPA concluded that there was insufficient data to determine whether the discharge was adversely affecting demersal fishes and epibenthic macroinvertibrates, and that available data on bioaccumulation of pesticides and toxics was inconclusive. In the TDD for this Facility, on the other hand, EPA concluded that adequate evidence of a BIP is present. It should also be noted that the Oxnard facility, which had a design capacity of 25 mgd, did eventually obtain a 301(h)-modified permit.

- On page 35, NRDC challenges the validity of the Discharger's efforts with UC Davis scientists to monitor its discharge for T. gondii. Staff recognizes that all sampling methodologies have limitations; however, the method used by the Discharger is the best available.

- On page 38, NRDC argues that the reissuance of the 301(h)-modified permit is prohibited under 40 CFR 125.59(b)(4) because the discharge of pollutants "enters into saline estuarine waters." This section of law prohibits issuance of 301(h)-modified permits for <u>direct</u> discharges to saline estuarine waters, not this discharge to the open ocean. NRDC bases this argument on a 1986 dye study, which suggested that the discharge may enter the mouth

of Morro Bay under certain infrequent oceanographic conditions. NRDC omits that this study found that the discharge was diluted from 16,700:1 to 91,000:1 (seawater:effluent) before entering the mouth of the Bay, and that was during flood tide conditions when the mouth of the Bay was hardly estuarine. This extremely high level of dilution before reaching the mouth of the Bay is verified by the Discharger's current offshore monitoring program, which is superior to the 1986 dye study in tracking the fate and transport of the discharge plume, and which indicates that the discharge is diluted by hundreds of parts of seawater within several meters of the outfall, and that the discharge plume is imperceptible at the mouth of Morro Bay. The stated prohibition clearly does not apply in this case.

- On page 40, NRDC disagrees with language common to all ocean discharge permits in California. The "shall not cause" language in the Receiving Water Limitations section of the proposed permit is taken directly from the California Ocean Plan, and complies with Clean Water Act Section 122.44. The proposed permit contains effluent limitations for all pollutants with reasonable potential to cause or contribute to a violation of a State water quality standard, including all priority pollutants with Water Quality Objectives. Thus, the "have a reasonable potential to cause, or contribute to" language that NRDC believes is necessary is already inherent in the effluent limitations, and is not necessary in the Receiving Water Limitations section of the permit.

- On page 41, NRDC argues that Discharger cannot show compliance with water recreation standards. This is false. As discussed above under "Bacteria", the Discharger's extensive beach monitoring program demonstrates there is no impact to beach water quality from the subject discharge. Staff analyzed all surf zone total coliform monitoring data collected since 1993...over ten years of data. The data set consisted of 385 to 390 samples at each monitoring station. With exception to the monitoring station at the mouth of Morro Creek, the annual median at each monitoring station was well below 70 MPN/100 mL. Staff's inclusion of the exemplary Heal the Bay Beach Report Card results for this beach was only to reinforce that the subject discharge is not impacting beach water quality. The Discharger's comprehensive beach monitoring program is the basis of staff's evaluations, not Heal the Bay's Beach Report Card (which is based on a far more limited data set). NRDC points out that Atascadero (i.e. Morro Strand State) Beach received an "F" grade for wet weather in the 2005 Report Card, but fails to qualify this statement by pointing out that winter 2004-2005 was an exceptionally wet year, and that the same beach received good grades for the dry season. If the discharge were impacting beach water quality, then one would expect the same beach to receive poor grades during the dry season as well. NRDC points out that it is unable to determine if the discharge plume comes back to shore. However, the Discharger's annual reports of its intensive offshore monitoring program all clearly illustrate that the discharge plume is rapidly diluted within a short distance from the outfall and not coming back to shore.

- On page 42, NRDC points out that the current beach monitoring program does not include enterococcus monitoring. Enterococcus monitoring was not required by the California Ocean Plan when the existing monitoring program was approved, and the proposed monitoring program includes enterococcus monitoring.

- On Page 47, NRDC states, "For trace metals, the Plant's data also shows a series of violations." This is patently false. The existing and proposed permit includes effluent limitations for these metals, which are protective of water quality. The Discharger has occasionally detected low levels of copper and chromium in effluent, but has never exceeded its effluent limitations.

- On page 50 and 51, NRDC argues that Anti-Degradation policies do not allow any new or increased discharges. The proposed permit does not allow any new or increased discharges. In fact, as discussed previously, effluent limitations for several constituents are more stringent than the existing permit. In addition, the Permit does not permit any degradation of receiving waters, whether this is a Tier III or Tier II discharge. The fact that Morro Bay is within Estero Bay does not make Estero Bay a Tier III water. In addition, NRDC argues that the discharge will so degrade receiving waters that accelerating the schedule by three to four years is critical, but that receiving waters are Tier III waters. The 301(h) modified discharge has existed for over twenty years, making it difficult to reconcile these two positions.

- On page 55, NRDC argues that the Discharger requires an "incidental take permit" from U.S. Fish and Wildlife for the take of sea otters in Morro Bay. This is incorrect. There is no evidence that the subject discharge is killing or harming sea otters, goby or steelhead.

- <u>Alternatives to issuance of the Permit and upgrade according to the settlement agreement:</u>

    - If the Board concludes that the Dischargers have not met the standards for a 301(h) modification, the Board must deny concurrence with EPA's Permit. For example, the Board might consider the evidence and conclude that the Discharger has not shown that a balanced, indigenous population exists outside the zone of initial dilution or in areas likely to be impacted by the discharge; *and* that the Discharger has not shown that the absence of BIP is caused by other pollutant sources and that the discharge is not causing or contributing to the absence of BIP. If the Board denies concurrence, the Clean Water Act would prohibit EPA from issuing the Permit. The Board would then either require a revision of the Discharger's report of waste discharge, if necessary; if not, Water Board staff would redraft the permit to include full secondary standards, notice another public comment period, and then notice another hearing. In the meantime, the Dischargers have advised that they will petition the denial to the State Water Board. If the State Water Board takes up the petition and issues an order, that will take approximately one year. Either NRDC or the Dischargers are likely to challenge the State Water Board order (or the Central Coast Water Board decision, if the petition is dismissed). Water Board counsel has concluded that there is a substantial exposure to litigation on these issues.

    - The upgrade schedule was negotiated, and is not a requirement of the Permit. The Board cannot impose a shorter schedule. A second alternative, with the concurrence of the Discharger, would be to revise the settlement agreement to provide for a shorter schedule. A continuance for this purpose is not recommended unless the Discharger requests it, since a continuance would add additional delay to final resolution of this matter. If a new settlement is feasible, it can be negotiated while any State Water

Board petition is pending. However, if the Water Board concludes that the Dischargers have satisfied Section 301(h), the Water Board may not deny concurrence merely to negotiate a new schedule, since that would constitute an abuse of the Board's discretion. Denial of the Permit must be based on failure to satisfy an applicable legal requirement.

Comment 41: Dr. Mark Gold of Heal the Bay, Santa Monica, California, submitted extensive written comments on February 3, 2006, at the request of **NRDC**. The comments include Dr. Gold's background and qualifications, an evaluation of beach monitoring data, an evaluation of monitoring design and information relied upon by U.S. EPA and the Regional Board, as well as Dr. Gold's curriculum vitae. The comment letter is too voluminous to include verbatim here, therefore is included in entirety as an attachment to the Staff Report.

In short, Dr. Gold believes that recent variations in San Luis Obispo County Environmental Health Department monitoring results for this beach suggests influences beyond seasonal storm water discharge, and that such influences could include the subject discharge. Dr. Gold criticizes the Discharger's surf-zone and receiving water monitoring program. Dr. Gold recommends denial of the Permit.

Staff Response 41: Dr. Gold's suggestions that the beach may be influenced by the subject discharge are based on a very limited set of recent beach monitoring by San Luis Obispo County Environmental Health Department. His conclusions are largely based on monthly monitoring during wet season 2004-2005, which includes less than 25 data for that period for this beach. By contrast, staff's evaluation of beach water quality extends back over ten years and includes nearly 400 data points for this beach. This difference exemplifies the superiority of the Discharger's surf-zone monitoring program.

Dr. Gold compares the depth of the subject discharge to those in Southern California, which discharge orders of magnitude more wastewater to the ocean. This is inappropriate comparison.

Dr. Gold states that "EPA and the Regional Board do not refer to monitoring information that would allow them to determine" if discharge plume comes back to shore. The Discharger's offshore monitoring program clearly illustrates that the discharge plume is rapidly diluted within a short distance from the outfall and is not coming back to shore.

Dr. Gold correctly points out that the current beach monitoring program does not include enterococcus monitoring. Enterococcus monitoring was not required by the California Ocean Plan when the existing monitoring program was approved. The proposed monitoring program includes enterococcus monitoring. Such monitoring will not be required until the proposed permit is reissued.

Even if valid, these reasons do not merit denial of the proposed Permit. Such reasons would normally only justify simple modifications to the Discharger's monitoring program, not denial of the Permit. Interestingly, if the Permit was denied and a permit with full-secondary requirements were issued instead, the entire surf-zone monitoring requirement could be eliminated, to be commensurate with other similar Central Coast discharges.

Comment 42: Dr. Bruce Bell of **Carpenter Environmental Associates**, Monroe, New York, submitted extensive written comments on behalf of NRDC on February 3, 2006. The comments include Dr. Bell's background and qualifications, evaluation of water quality impacts, evaluation of the upgrade schedule, and Dr. Bell's curriculum vitae. Dr. Bell is a leading expert of environmental engineering. The comment letter is too voluminous to include verbatim here, therefore is included in entirety as an attachment to the Staff Report.

Dr. Bell provides an evaluation of water quality impacts and the secondary treatment upgrade schedule. Dr. Bell estimates that the upgrade to secondary treatment may be completed in 4.7 to 6.6 years, plus time for Water Board review of the facilities plan. He states, "In summary, the City and District's reasons for recommending the proposed 9.5 year schedule are based on political issues and not technical/construction issues."

Staff Response 42: Staff finds most of Dr. Bell's comments factually correct, although staff has concluded that at least 7 years is a more realistic timeline.

Comment 43: The Otter Project, local chapters of the **Sierra Club** and **Surfrider Foundation**, **California Coastkeeper Alliance**, and **Defenders of Wildlife** all submitted written comments letter. Those comment letters are included in entirety as attachments to the Staff Report. The comment letters either urge denial of the proposed Permit or urge adoption of a shorter upgrade timeline.

Staff Response 43: These comment letters essentially reiterate NRDC's comments and do not necessitate further treatment here. Please refer to staff's response to NRDC's comments above (Comment 40).

Note: The Dischargers submitted a rebuttal to NRDC's comments on March 3, 2006. The Water Board Chairman approved this submittal. Due to timing of the rebuttal, staff is not able to provide a response here.

C. Public Hearing

The Central Coast Water Board and U.S. EPA will hold a joint public hearing on reissuance of the Draft NPDES Permit during the Central Coast Water Board's regular meeting as follows:

Date:	**March 24, 2006**
Time:	**8:30 a.m.**
Location:	**Regional Water Quality Control Board Conference Room** **895 Aerovista Place, Suite 101** **San Luis Obispo, California**

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

Please be aware that dates and venues may change. Our web address is www.waterboards.ca.gov/centralcoast, where you can access the current agenda for changes in dates and locations.

D. Petitions

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

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

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Coast Water Board by calling or faxing Sue Gerdsen at (805) 549-3465 (phone) or (805) 788-3521 (fax).

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Matt Thompson at (805) 549-3159 or mthompson@waterboards.ca.gov, or Harvey Packard at (805) 542-4639 or hpackard@waterboards.ca.gov.

ATTACHMENT G - ELEMENTS OF THE WASTEWATER COLLECTION SYSTEM MANAGEMENT PLAN

In accordance with Order Section VI.C.1.b, *Wastewater Collection System Requirements*, the Dischargers are encouraged to use its existing programs or practices to address the Management Plan elements listed below. Where the Dischargers determine that an element does not apply to its collection system, the Dischargers shall provide in the appropriate section of its Management Plan the rationale for omitting the element.

I. Goals: The goal of the Wastewater Collection System Management Plan is to prevent overflows and to provide a plan and schedule for implementation of measures to prevent overflows.

II. Organization: The Wastewater Collection System Management Plan must identify the following components:

A. Administrative and maintenance positions responsible for implementing measures in the Wastewater Collection System Management Plan program, including lines of authority by organization chart or similar document; and

B. The chain of communication for reporting overflows, from receipt of a complaint or other information, including the person responsible for reporting overflows to the Central Coast Regional Water Quality Control Board, Santa Barbara County Health Department, and the State Office of Emergency Services (OES).

III. Legal Authority: The Wastewater Collection System Management Plan shall include or make reference to legal authority, through sewer use ordinances, service agreements, or other legally binding procedures, to:

A. Control infiltration and connections from inflow sources, including satellite systems;

B. Require that sewers and connections be properly designed and constructed;

C. Ensure proper installation, testing, and inspection of new and rehabilitated sewers (such as new or rehabilitated collector sewers and new or rehabilitated service laterals within the Dischargers' jurisdiction); and,

D. Limit fats and greases and other debris that may cause blockages in the collection system.

IV. Measures and Activities: In order to reduce overflows, the Wastewater Collection System Management Plan must address the elements listed below that are appropriate and applicable to the Dischargers' system and identify the person or position in the organization responsible for each element.

A. Provide adequate operation and maintenance of facilities and equipment.

B. Maintain an up-to-date map of the collection system showing all gravity line segments and

manholes, pumping facilities, pressure pipes and valves, and storm water conveyance facilities.

C. Maintain relevant information to establish and prioritize appropriate Wastewater Collection System Management Plan activities (such as the immediate elimination of dry weather overflows or overflows into sensitive waters, such as public drinking water supplies and their source waters, swimming beaches and waters where swimming occurs, shellfish growing areas, waters within Federal, State, or local parks, and water containing threatened or endangered species or their habitats), and identify and illustrate trends in overflows, such as frequency and volume.

D. Routine preventive operation and maintenance activities by staff and contractors; including a system for scheduling regular maintenance and cleaning of the collection system with more frequent cleaning and maintenance targeted at known problem areas as well as a tracking system for work orders.

E. Identify and prioritize structural deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. This shall include a rehabilitation plan including schedules for the entire system. As with the preventative maintenance program, sewer rehabilitation and replacement is crucial for the prevention of spills. Among the provisions that should be specified in this section is the need to direct rehabilitation and replacement of sewer pipes which are at risk of collapse or prone to more frequent blockages due to pipe defects. The plan should also include regular visual and video inspection of sewer pipes and a system for assessing and ranking the condition of sewer pipes. Finally, the rehabilitation and replacement plan should include a financial plan that properly manages and protects the infrastructure assets. The actions outlined above shall be coordinated with the requirements for Infiltration/Inflow and Spill Prevention contained in Order Section VI.C.1.b, *Wastewater Collection System Requirements*.

F. Provide training on a regular basis for staff in collection system operations, maintenance, and monitoring, and determine if contractors' staffs are appropriately trained (e.g., through performance standards in contracts, proper licensing, or other recognized means of demonstrating appropriate competency).

G. Provision of equipment and replacement parts inventories, including identification of critical replacement parts.

H. Establish an implementation plan and schedule for a public education outreach program that promotes proper disposal of grease and fats.

I. Establish a plan for responding to overflows from private property that discharge to public right of ways and storm drains, to prevent discharges from overflows to surface waters and storm drains, to the extent the District has jurisdiction to do so. For example, where the District has no jurisdiction over the public right-of-way or storm drain toward which an overflow is migrating or to which it is discharging, the plan may consist of reporting overflows to the appropriate authority for corrective action, directing property owners to the appropriate authorities, and advising property owners of the need to hire a private plumber.

J. Develop a plan and a schedule for providing an analysis of alternative methods of disposal for grease and fats, and an implementation plan and schedule for providing adequate disposal capacity for grease and fats generated within the wastewater collection system service area. For example, this plan may include an evaluation of the feasibility of using sludge digesters at the Treatment Facility for grease disposal and treatment, recycling, rendering, and other disposal alternatives.

K. Describe fiscal resources necessary to ensure system operation, including fee structure, fiscal resources, actual and projected five-year budget expenses for staffing, operation, capital improvement projects, and reserves.

L. Describe staffing available to ensure system operation (identifying individuals and titles) including developing, implementing, and revising the Wastewater Collection System Management Plan. Include an organizational chart, duties, and training frequency.

V. Design and Performance Provisions

A. Develop and/or adopt design and construction standards and specifications for the installation of new sewer systems, pump stations, and other appurtenances; and for rehabilitation and repair of existing sewer systems; and

B. Develop and/or adopt procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances, and for rehabilitation and repair projects.

VI. Monitoring, Measurement, and Plan Modifications

A. Monitor the implementation and, where appropriate, measure the effectiveness of each element of the Wastewater Collection System Management Plan;

B. Update program elements, as appropriate, based on monitoring or performance evaluations; and

C. Modify the Wastewater Collection System Management Plan program, as appropriate, to keep it updated and accurate and available for audit at all times.

VII. Overflow Emergency Response Plan: The Dischargers shall develop and implement an Overflow Emergency Response Plan that identifies measures to protect public health and the environment. At a minimum, this plan should provide for the following actions.

A. Ensure proper notification procedures so that the primary responders are informed of all overflows in a timely manner (to the greatest extent possible).

B. Ensure that all overflows are appropriately responded to, including ensuring that reports of overflows are immediately dispatched to appropriate personnel for investigation and appropriate response.

C. Ensure immediate notification of health agencies and other impacted entities (e.g., water suppliers) of all overflows. The plan should provide for the reporting of overflows to the Central Coast Water Board, Santa Barbara County Health Department, the District, and the State Office of Emergency Services (OES) in accordance with each agency's policy. The Wastewater Collection System Management Plan should identify the public health agency and other officials who will receive immediate notification.

D. Ensure that appropriate staff and contractor personnel are aware of and follow the plan, and are appropriately trained.

E. Provide emergency operations, such as traffic and crowd control, and other necessary emergency response.

F. Take all reasonable steps to contain sewage, prevent sewage discharges to surface waters, and minimize or correct any adverse impact on the environment resulting from the overflows, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.

G. Develop and implement a plan to respond in a timely manner to spills and other emergencies. Collection system staff should be able to initiate a response to a sewage spill in less than an hour from the first call. The Dischargers should be capable of meeting this response time day or night, every day of the week. The Dischargers must own or have ready access to spill and emergency response equipment such as vacuum trucks, hydroflushers, pumps, temporary bypass hoses, and portable generators of adequate number and capacity to operate pump stations.

H. Describe offsite and onsite alarm systems, response times, and methods for detecting spills from the system,

VIII. Source Control Program: Prepare and implement a grease, fat, and oil source control program to reduce the amount of these substances discharged to the wastewater collection system. This plan shall include the legal authority to prohibit discharges to the system and identify measures to prevent overflows caused by fat, oil, and grease blockages of sewers. The elements of an effective grease control program may include requirements to install grease removal devices (such as traps or, preferably, interceptors), design standards for the removal devices, maintenance requirements, Best Management Practices (BMP) requirements, record keeping, and reporting requirements. An effective grease control program must also include authority to inspect grease producing facilities, enforcement authorities, and sufficient staff to inspect and enforce the grease ordinance.

A. The grease control program shall identify sections of the wastewater collection system subject to grease blockages and establish a cleaning maintenance schedule for each section; and,

B. The program shall develop and implement source control measures, for all sources of grease and fats discharged to the wastewater collection system, for each section identified in (A) above.

IX. System Evaluation and Capacity Assurance Plan: Prepare and implement a capital improvement plan that will provide hydraulic capacity of key wastewater collection system elements under peak flow conditions. At a minimum, the plan must include:

A. **System Evaluation** - Evaluate current capacity of the wastewater collection system, including any existing diversions of urban runoff to the collection system and those portions of the collection system which are experiencing or contributing to an overflow discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from overflows that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity), and the major sources that contribute to the peak flows associated with overflow events;

B. **Capacity Enhancement Measures** - Establish a short- and long-term capital improvement program to address deficiencies including prioritization, alternatives analysis, schedules, diversions of urban runoff to the wastewater collection system during dry weather periods, and control of infiltration and inflow during both wet weather events and dry weather periods; and

C. **Plan Updates** - At a minimum, the plan must be updated annually to describe any significant change in proposed actions and/or implementation schedules. The updates should include available information on the performance of measures that have been implemented.

X. Annual Plan Updates: As part of the Wastewater Collection System Management Plan, the Dischargers shall conduct an internal audit, appropriate to the size of the system and the number of overflows, and submit a report of such audit (in conjunction with the annual report specified in the MRP), evaluating the Wastewater Collection System Management Plan and its compliance with this subsection, including its deficiencies and steps to correct them.

XI. Time Schedule / Communications: The Dischargers should communicate at least annually with interested parties such as the Central Coast Water Board and the San Luis Obispo County Environmental Health Department, on the implementation and performance of its Wastewater Collection System Management Plan. The communication system should allow interested parties to provide input to the Dischargers as the program is developed and implemented. The Dischargers shall develop and implement the Wastewater Collection System Management Plan according to the following schedule:

MANAGEMENT PLAN DEVELOPMENT SCHEDULE

Task	Completion Date
Legal Authority (Part III)	April 1, 2008
Measures and Activities (Part IV)	April 1, 2008
Overflow Emergency Response Plan (Part VII)	July 1, 2007
Design and Performance Provisions (Part V)	April 1, 2009
Capacity Evaluation (Part IX)	April 1, 2009
Source Control Program (Part VIII)	April 1, 2008
Final Wastewater Collection System Management Plan	April 1, 2009

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