CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
AND
U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX

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ADDENDUM NO. 2 TO ORDER NO. R9-2002-0025
NPDES NO. CA0107409

AMENDMENT TO THE ORDER AND ASSOCIATED MONITORING AND REPORTING PROGRAM FOR THE CITY OF SAN DIEGO E. W. BLOM POINT LOMA METROPOLITAN WASTEWATER TREATMENT PLANT TO ALLOW FOR DISINFECTION OF TREATED WASTEWATER DISCHARGE TO THE PACIFIC OCEAN THROUGH THE POINT LOMA OCEAN OUTFALL SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On April 10, 2002, this Regional Board adopted Order No. R9-2002-0025, Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit for the City of San Diego E. W. Blom Point Loma Metropolitan Wastewater Treatment Plant (PLMWTP), NPDES Permit No. CA0107409. The United States Environmental Protection Agency (USEPA) issued its final approval of the joint permit on September 13, 2002. Order No. R9-2002-0025 establishes waste discharge requirements for the discharge of up to 240 million gallons per day (MGD) of treated wastewater to the Pacific Ocean via the Point Loma Ocean Outfall (PLOO).

2. Addendum No. 1 to Order No. R9-2002-0025 was adopted by the Regional Board on June 11, 2003 and USEPA issued its final approval of the addendum on June 25, 2003. Addendum No. 1 supersedes and entirely replaces the monitoring and reporting requirements previously established by Order No. R9-2002-0025, NPDES Permit No. CA0107409.

3. By letter dated November 13, 2007, the City of San Diego requested Regional Board approval to initiate operation of a prototype effluent disinfection system at the PLMWTP. Sodium hypochlorite solution, used for disinfection, will be applied as determined by the City of San Diego at a feed point immediately downstream of the sedimentation tanks. The request was made because of a recent interpretation by USEPA that bacterial water quality objectives in the San Diego Region apply surface to bottom, up to three nautical miles from shore. USEPA's interpretation of the applicability of bacterial objectives will be incorporated into the requirements of the next NPDES permit for the (PLOO) discharge.

The City of San Diego proposes to demonstrate compliance with bacterial objectives at all its monitoring stations, surface to bottom, up to three nautical miles from shore.

4. The potential exists for organic compounds in treated wastewater to become halogenated after chlorine is added, resulting in chlorination byproducts. Effluent concentration limits for chlorination byproducts and total chlorine residual are established in Order No. R9-2002-0025.

5. The 2005 California Ocean Plan's definition of the zone where bacterial objectives apply includes areas used for water contact sports, as determined by the Regional Board (i.e., waters designated as REC-1 for contact water recreation). USEPA maintains that based on the Water Quality Control Plan for the San Diego Basin 9 (Basin Plan) definitions for REC-1 beneficial use and for Ocean Waters, REC-1 beneficial use must be protected throughout State of California territorial marine waters in the San Diego Region, which extend out to three nautical miles from shore.

6. The permit modification established by this Addendum is authorized pursuant to Section G.1.f (40 CFR 122.62 *Modification or revocation of permits)* and Section G.3 (*Termination or modification of permit)* of Order No. R9-2002-0025.

7. The Regional Board has notified all known interested parties of its intent to modify Order No. R9-2002-0025.

8. The Regional Board in a public hearing on August 13, 2008 heard and considered all comments pertaining to the modification of Order No. R9-2002-0025.

9. Except as contradicted or superseded by the findings and directives set forth in this addendum (Addendum No. 2), all of the previous findings and directives of Order No. R9-2002-0025 and addendum remain in full force and effect.

10. The issuance of this addendum is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act [Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.] in accordance with Section 13389 of the California Water Code.

IT IS HEREBY ORDERED THAT Order No. R9-2002-0025 shall be modified as follows:

1. Section F.15.a of the Order shall contain the following additional text:

   Toxicity re-screening shall also be performed upon initiation of chlorination.

2. Table 1. Influent and Effluent Sampling and Analysis Requirements of the monitoring and reporting requirements shall include the following constituent and footnotes from the 2005 California Ocean Plan Table B parameters for protection of marine aquatic life:

CONSTITUENT	Units	Sample type	Sampling frequency		
			Influent stream	Effluent stream	Emergency connection
Total Chlorine Residual[12]	µg/l	Grab	-	4 per day[13]	-

[12] Per Table II, Required Containers, Preservation Techniques, and Holding Times, in 40 CFR 136, total chlorine residual samples are required to be analyzed immediately. Holding time must not exceed 15 minutes.

[13] Samples must be collected at equal time intervals throughout on-site ELAP-accredited laboratory working hours.

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Addendum adopted by the California Regional Water Quality Control Board, on August 13, 2008.

JOHN H. ROBERTUS
Executive Officer

June 11, 2003

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
AND
U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX

ADDENDUM NO. 1 TO ORDER NO. R9-2002-0025, NPDES PERMIT NO. CA0107409 MODIFYING THE MONITORING AND REPORTING PROGRAM FOR THE CITY OF SAN DIEGO E. W. BLOM POINT LOMA METROPOLITAN WASTEWATER TREATMENT PLANT

DISCHARGE TO THE PACIFIC OCEAN THROUGH THE POINT LOMA OCEAN OUTFALL SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (Regional Board) and the United States Environmental Protection Agency, Region IX (USEPA) find that:

1. On April 10, 2002, this Regional Board adopted Order No. R9-2002-0025, *Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit No. CA0107409 for the City of San Diego E.W. Blom Point Loma Metropolitan Wastewater Treatment Plant Discharge to the Pacific Ocean through the Point Loma Ocean Outfall, San Diego County*. The USEPA issued its final approval of the joint permit, as amended by State Water Resources Control Board (State Board) Order No. WQO 2002-0013, on September 12, 2002. During the public hearing on April 10, 2002, this Regional Board indicated that the monitoring and reporting program associated with the order would be modified at a later date to incorporate recommendations of the Southern California Coastal Water Research Project's (SCCWRP) *Model Monitoring Program for Large Ocean Discharges in Southern California*. The modifications to the monitoring and reporting program in this addendum are based on those recommendations.

2. According to Section 13383(e) of the California Water Code, the Regional Board may, upon application by any affected person, or on its own motion, review and revise waste discharge requirements.

3. The issuance of waste discharge requirements for this discharge is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act [Public Resources Code, Division 13, Chapter 3, Section 21000 *et seq*.] in

accordance with Section 13389 of the California Water Code.

4. The Regional Board has notified all interested parties of its intent to modify Order No. R9-2002-0025, NPDES Permit No. CA0107409.

5. The Regional Board in a public hearing on June 11, 2003 heard and considered all comments pertaining to the modification of Order No. R9-2002-0025, NPDES Permit No. CA0107409.

IT IS HEREBY ORDERED that, effective August 1, 2003, the following supersedes and entirely replaces the monitoring and reporting requirements previously established by Order No. R9-2002-0025, NPDES Permit No. CA0107409.

A. GENERAL MONITORING AND REPORTING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored waste stream. All samples shall be taken at the monitoring points specified in this MRP and, unless otherwise specified, before the waste stream joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall be subject to the approval of the Regional Board Executive Officer (hereinafter Executive Officer) and the U. S. Environmental Protection Agency, Region IX (hereinafter USEPA), Water Division Director (hereinafter Director) and shall not be changed without notification to and the approval of the Executive Officer and the Director. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirements of Order No. R9-2002-0025.

2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than $\pm$5 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40 of the Code of Federal Regulations Part 136 (40CFR 136), Guidelines Establishing Test Procedures for the Analysis of Pollutants, USEPA SW-846, as amended, unless otherwise specified for sludge in 40CFR 503, or unless other test procedures have been specified in Order No. R9-2002-0025 and/or in this monitoring and reporting program.

4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services in accordance with the provision of Section 13176 CWC or a laboratory approved by the Executive Officer.

5. Monitoring results must be reported on discharge monitoring report (DMR) forms approved by the Executive Officer.

6. If the discharger monitors any pollutant more frequently than required by this MRP, using test procedures approved under 40 CFR 136, or as specified in this MRP, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. The increased frequency of monitoring shall also be reported.

7. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this MRP, Order No. R9-2002-0025 and any enforcement order issued by the Regional Board, and records of all data used to complete the application for Order No. R9-2002-0025. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer or Director. It is recommended that the discharger maintain the results of all analyses indefinitely.

8. Records of monitoring information shall include:

    a. The date, exact location, and time of sampling or measurements;

    b. The individual(s) who performed the sampling or measurements;

    c. The date(s) analyses were performed;

    d. The laboratory and individual(s) who performed the analyses;

    e. The analytical techniques or methods used; and

    f. The results of all such analyses.

9. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order No. R9-2002-0025 or in this MRP. The discharger shall report the analysis results, calculation results, data, and equations used in calculations.

10. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Officer a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required by General Monitoring and Reporting Provision A.2.

11. The discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. An annual report shall be submitted by April 1 of each year which summarizes the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples or at least one sample per month, whichever is greater. The discharger must have a success rate equal to or greater than 80 percent. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA, the discharger will participate in the National Pollutant Discharge Elimination System (NPDES) discharger monitoring report quality assurance (QA) performance study.

12. The discharger shall report all instances of noncompliance not reported under 40 CFR 122.44 at the time monitoring reports are submitted. The reports shall contain the information listed in 40 CFR 122.44.

13. The monitoring reports shall be signed by an authorized person as required by 40 CFR 122.44.

14. A composite sample is generally defined as a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. The 100-milliliter minimum volume of an aliquot does not apply to automatic self-purging samplers.

15. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

16. For all bacterial analyses, sample dilutions shall be performed so the range of values extends from 2 to 16,000. The detection method used for each analysis shall be reported

with the results of the analysis.

17. Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Executive Officer (and approved by USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure (EPA 600/4-85/076) or any improved method determined by the Executive Officer (and approved by USEPA) to be appropriate.

18. MRP No. R9-2002-0025 may be modified by the Executive Officer and USEPA to enable the discharger to participate in comprehensive regional monitoring activities conducted in the Southern California Bight during the term of this permit. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated sampling efforts, the discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources.

19. By July 1 of each year, the discharger shall submit an annual report of the treatment plant and outfall operations to the Executive Officer and USEPA which contains 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 with the requirements of Order No. R9-2002-0025 and this MRP. The report shall address operator certification and provide a list of current operating personnel and their grade of certification. The report shall include the date of the facilities' Operations and Maintenance Manual, the date the manual was last reviewed, and a statement as to whether the manual is complete and valid for the current facilities. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with Order No. R9-2002-0025 and this MRP, and provide a summary of performance relative to the requirements in this MRP.

20. The sampling frequency of "daily" means that samples shall be collected seven days per week. "Weekly" samples shall be collected such that each day of the week is represented during a seven week period.

21. Monitoring results shall be reported at intervals and in a manner specified in this MRP and Order No. R9-2002-0025. Monitoring reports shall be submitted to the Executive Officer and to USEPA according to the following schedule:

REPORTS	Report Period	Report Due
MONTHLY REPORTS Influent and Effluent Solids Removal/Disposal Receiving Water Quality Report Tijuana Cross-Border Emergency Connection (when flowing)	Monthly	By the 1st day of 2nd following month (e.g., March 1 for January)
QUARTERLY REPORTS Sludge Analysis	January-March April-June July-September October-December	June 1 September 1 December 1 March 1
SEMI-ANNUAL REPORTS Pretreatment Report	January-June	September 1
ANNUAL REPORTS Pretreatment Report (Provision A.19) Sludge analysis QA Report Treatment plant and outfall operations Outfall inspection Receiving waters monitoring report Kelp report	January-December	April 1 April 1 April 1 July 1 July 1 July 1 October 1

22. All influent, effluent, and receiving water data shall be submitted annually to USEPA for inclusion in the STORET database. The data shall be submitted in an electronic format specified by USEPA.

B. INFLUENT AND EFFLUENT MONITORING

Influent monitoring is required to determine the effectiveness of pretreatment and nonindustrial source control programs, to assess the performance of treatment facilities, and to evaluate compliance with effluent limitations. As such, influent monitoring results must accurately characterize raw wastewater from the entire service area of the treatment facilities, unaffected by in-plant or return or recycle flows or the addition of treatment chemicals.

Effluent monitoring is required to determine compliance with the permit conditions and to identify operational problems and improve plant performance. Effluent monitoring also provides

information on wastewater characteristics and flows for use in interpreting water quality and biological data. The effluent sampling station shall be located where representative samples of the effluent can be obtained. The sampling station shall be located downstream from any in-plant return flows and from the last connection through which wastes can be admitted to the outfall.

Influent and effluent monitoring shall be conducted as shown in Table 1. In addition monitoring of the waste flow in the standby emergency connection from the City of Tijuana, Mexico, shall be conducted as shown in Table 1, whenever there is flow from Mexico and/or the SBIWTP through the connection.
The discharger shall report the Mass Emission Rate (MER) in lb/day or mt/yr for all constituents that have MER effluent limitations or MER benchmarks established by Discharge Specifications section B.1 and/or B.11 of Order No. R9-2002-0025. The discharger shall also report the concentration and flowrate used to calculate the MER for each constituent.

The system-wide percent removals of TSS and BOD_5 shall be calculated using the following formula (mass emissions in metric tons):

$$\% \text{ Removal (TSS or } BOD_5) = \frac{(\text{System Influents} - \text{Return Streams}) - \text{Outfall Discharge}}{\text{System Influents} - \text{Return Streams}} \times 100$$

Where,

System Influents	=	PLMWTP Influent, North City Water Reclamation Plant (NCWRP) Influent Pump Station, and NCWRP Influent from Penasquitos Pump Station.
Return Streams	=	NCWRP Filter Backwash, NCWRP Plant Drain, NCWRP Secondary and Un-disinfected Filtered Effluent Bypass, NCWRP Final Effluent, and MBC Centrate

The TSS and BOD_5 concentration, together with flow rate, of each stream shall be measured daily (Table 2) and a system-wide removal rate calculated according to the above formula. In the event that a flow rate measurement, TSS concentration, or BOD_5 concentration is not obtained from a stream, the median value for the previous calendar year for that stream shall be used as a surrogate number to allow completion of the calculation. The discharger shall be required to flag values where surrogate numbers are used in their self-monitoring reports submitted to the Executive Officer. The failure to obtain a value may still be considered a violation of the permit that could result in enforcement action depending on the frequency of failures and efforts by the discharger to prevent such failures.

C. SLUDGE MONITORING REQUIREMENTS

General sludge monitoring and reporting requirements are contained in Sludge Requirements, Section I, of Order No. R9-2002-0025.

D. RECEIVING ENVIRONMENT MONITORING

Receiving environment monitoring shall be conducted as specified below. Station location, sample type, sample preservation, and analyses, when not specified, shall be by methods approved by the Executive Officer and Director.

The monitoring program around the current discharge site off Point Loma has been in existence since 1991 and has focused on physical, chemical, and biological patterns in the region. This program is being revised to reallocate existing effort to address crucial processes not addressed by earlier monitoring programs, and provide a regional framework for interpreting discharge-related effects. The monitoring program has been modified to reflect the principles expressed in the "Model Monitoring Program for Large Ocean Dischargers in Southern California" (SCCWRP, 2002). The following three components constitute the new receiving water monitoring program: 1) Core Monitoring, 2) Strategic Process Studies, and 3) Regional Monitoring. These three components are needed to evaluate compliance with the permit, federal 301(h) decision criteria, and State water quality standards, and to assess the effects of the discharge on the marine environment.

1. Core Monitoring.

There are five components to the core monitoring program: a) general water quality monitoring, b) bacteriological monitoring of the offshore waters, kelp beds, and shoreline, c) monitoring of sediments for grain size, chemistry and benthic community structure, d) monitoring of demersal fish and megabenthic invertebrate communities, and contaminant body burdens in fishes and e) monitoring of kelp bed canopy cover.

a. <u>General water quality</u>. The offshore water quality sampling program is designed to help evaluate the fate of the wastewater plume under various conditions and to determine if California Ocean Plan standards are being met. A 36 station grid shall be sampled on a quarterly basis for salinity, temperature, density, pH, transmissivity, dissolved oxygen (DO), chlorophyll *a* and enterococcus (Table 3, Figure 1). The grid shall be oriented along depth contours specified in Table 4. Salinity, temperature, density, pH, dissolved oxygen, light transmittance and chlorophyll *a* shall be measured throughout the entire water column. These may be measured

using a CTD equipped with probes for pH and DO, a transmissometer (for light transmittance), and a fluorometer (for chlorophyll *a* measurements).

General water quality sampling at an additional eight stations located in the kelp beds is conducted at least five times per month (Tables 3 and 4, Figure 1). Sampling at these stations also includes the collection of water samples for bacteriological analysis (see "Microbiological sampling" below).

Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner to enable the observer to describe and to report the presence, if any, of floatable materials of sewage origin. Observations of wind (direction and speed), weather (e.g., cloudy, sunny, or rainy), and tidal conditions (e.g., high or low tide) shall be recorded. Observations of water color, discoloration, oil and grease, turbidity, odor, materials of sewage origin in the water or on the beach shall be recorded. These observations shall be taken whenever a sample is collected.

b. Microbiological sampling. The purpose of bacterial sampling is to provide data to help track the wastewater plume in the offshore waters, to evaluate compliance with recreational water standards in the kelp beds, and to address issues of beach water quality at the shoreline stations.

Enterococcus shall be measured at the 36 offshore stations at discrete sampling depths on a quarterly basis (Tables 3 and 4, Figure 1). The bottom sample depths listed in Table 4 correspond to the nominal depth contour for these stations; these "bottom" samples should be taken as near to the bottom as possible (e.g., around 1-2 m off the bottom), although the actual depth of sampling may vary slightly due to sea conditions and tidal cycle. The purpose of this offshore sampling is to assist in tracking the wastewater plume and not for compliance purposes, since the recreational bacterial standards do not apply beyond the 3-mile limit.

Total coliforms, fecal coliforms and enterococcus shall be sampled at the eight kelp bed stations at least five times per month, such that each day of the week is represented over a two month period. Samples shall be collected from three discrete depths (Tables 3 and 4, Figure 1); see above paragraph for description of bottom depths. For stations located along the 9-m depth contour, samples shall be collected at 1 m below the surface, at 3 m below the surface, and near the bottom (~9 m). For stations located along the 18-m depth contour, samples shall be collected at depths of 1 m below the surface, 12 m below the surface, and near the bottom (~18 m).

Total coliforms, fecal coliforms and enterococcus shall be sampled on a weekly basis at eight shoreline stations such that each day of the week is represented over a two month period. (Table 5, Figure 1).

The results of the microbiological sampling at the kelp bed and shoreline stations will be compared to California Ocean Plan Recreational Water standards.

c. Sediment monitoring. The physical and chemical properties of sediments and the biological communities that live in or on these sediments shall be monitored to evaluate potential effects of the outfall. The sediment monitoring program consists of a core program to assess spatial and temporal trends, a special mapping study to further delineate the spatial extent or footprint of any potential effect, and a regional monitoring component.

A core set of 12 to 22 stations shall be sampled twice a year (January and July) to assess spatial and temporal trends (Table 6, Figure 2). These consist of 12 primary core stations located along the 98-m depth contour, and an additional 10 secondary core stations located along the 88-m and 116-m depth contours.

A special study shall be conducted early on in the permit period to determine the optimum sampling design for mapping outfall effects (see Strategic Process Studies). A follow-up mapping effort shall also be conducted within the permit cycle. To accommodate these studies, the requirements for sampling the secondary cores stations shall be relaxed during the years when these mapping efforts occur. The requirements for sampling the secondary core stations shall also be relaxed to allow participation in bight-wide regional monitoring efforts (e.g., Bight'03).

Sediment samples for chemical analyses shall be taken from the top 2 cm of the grab. These samples shall be analyzed for the set of constituents as listed in Table 7. For sediment chemistry, ambient monitoring may be conducted using USEPA approved or methods developed by NOAA's National Status and Trends Program for Marine Environmental Quality or methods developed in conjunction with the Southern California Bight Regional Monitoring Program. For chemical analysis of sediment, samples shall be reported on a dry weight basis.

Benthic community sampling shall consist of two replicate samples collected at each station using a 0.1-m^2 modified Van Veen grab. These sample grabs shall be separate from those collected for chemistry analyses. The samples shall be sieved using a 1.0-mm mesh screen. The benthic organisms retained on the sieve shall be fixed in 15 percent buffered formalin, and transferred to 70 percent ethanol within two to seven days for storage. All benthic infaunal organisms obtained during benthic monitoring shall be counted and identified to as low a taxon as possible. This enumeration and identification of organisms continues the historical data base developed by the discharger.

Analysis of benthic community structure shall include determination of the number of species, number of individuals per species, and total numerical abundance present. The following parameters shall be summarized for each station:

Number of species per 0.1 m^2
Total number of species per station
Total numerical abundance
Infaunal trophic index (ITI)
Benthic response index (BRI)
Swartz' 75% dominance index
Shannon-Weiner's diversity index (H')
Pielou evenness (J')

d. Fish and invertebrate monitoring. Epibenthic trawls shall be conducted to assess the structure of demersal fish and megabenthic invertebrate communities, while the presence of priority pollutants in fish will be analyzed from species captured using both trawling and rig fishing techniques. Single community trawls for fish and invertebrates shall be conducted semi-annually at six trawl stations (Table 8, Figure 3). These stations represent an area near the outfall (stations SD10 and SD12), an area upcoast of the outfall (stations SD13 and SD14), and an area downcoast of the outfall (stations SD7 and SD8). Trawls shall be conducted using a Marinovich 7.62 m (25 ft) head rope otter trawl, using the guidance specified in the field manual developed for the Southern California Bight regional monitoring surveys. Captured organisms shall be identified at all stations.

All fish and megabenthic invertebrates collected by trawls should be identified to species if possible. Community structure analysis should be conducted at all stations for both fish and invertebrates. For fish, community structure analysis shall consist of determining the total wet weight and total number of individuals per species, the total numerical abundance of all fish, species richness, species diversity (H′), and multivariate pattern analyses (e.g., ordination and classification analyses). The presence of any physical abnormalities or disease symptoms (e.g., fin erosion, external lesions, tumors) or parasites shall also be recorded. For invertebrates, community structure shall be summarized as the total number of individuals per species, the total numerical abundance of all invertebrates, species richness, and species diversity (H′).

Chemical analyses of fish tissues shall be performed annually on target species collected at or near the trawl and rig fishing stations (see Figure 3). The various stations are classified into zones for the purpose of collecting sufficient numbers of fish for tissue analyses (see Table 8). Trawl zone 1 represents the nearfield zone, defined as the area within a 1-km radius of stations SD10 and/or SD12; trawl zone 2 is considered the northern farfield zone, defined as the area within a 1-km radius of stations SD13 and/or SD14; trawl zone 3 represents the LA-5 disposal site zone, and is defined as the area centered within 1-km radius of station SD8; trawl zone 4 is considered the southern farfield zone, and is defined as the area centered within a 1-km radius of station SD7. The two rig fishing stations also represent two distinct zones. Rig fishing zone 1 is

the nearfield area centered within a 1-km radius of station RF1; rig fishing zone 2 is considered the farfield area centered within a 1-km radius of station RF2.

Liver tissues shall be analyzed annually from fish collected in each of the above four trawl zones. Each trawl station may be trawled up to a maximum of five times in order to acquire sufficient numbers of fish for composite samples within a zone; trawls subsequent to the initial community trawl discussed above (i.e., trawls 2-5/site) may occur anywhere within a defined zone. Three replicate composites samples shall be prepared from each trawl zone, with each composite consisting of tissues from at least three fish of the same species collected within a zone. These liver tissues shall be analyzed for the presence of lipids, PCB congeners, chlorinated pesticides, and the metals mercury, arsenic and selenium (Table 9). The species targeted for analysis at the trawl sites shall be selected based upon their ecological or commercial importance (see Table 9). These species shall be primarily flatfish, and include the longfin sanddab (*Citharichthys xanthostigma*) and the Pacific sanddab (*Citharichthys sordidus*). If sufficient numbers of these primary target species are not present in a zone, secondary candidate species such as other flatfish or rockfish may be collected as necessary (see Table 9).

Rig fishing shall be performed annually to monitor the uptake of pollutants in fish species which are consumed by humans. Theses fish shall be representative of those caught by recreational and commercial fishery activities in the region. All fish shall be collected by hook and line or by setting baited lines or traps within the two zones described above. The species targeted for analysis at the rig fishing sites shall be primarily rockfish (see Table 9), and include the vermilion rockfish (*Sebastes miniatus*) and the copper rockfish (*Sebastes caurinus*). If sufficient numbers of these primary fish species are not present, other species (e.g., rockfish, scorpionfish) may be collected as necessary. Three replicate composite samples of the target species shall be obtained from each zone, with each composite consisting of a minimum of three individual fish. Muscle tissues shall be removed from the composites and chemically analyzed for the presence of lipids, PCB congeners, chlorinated pesticides, and the metals arsenic, cadmium, chromium, copper, lead, mercury, selenium, tin and zinc.

e. <u>Monitoring of the kelp bed canopy</u>. Kelp bed monitoring is intended to assess the extent to which the discharge of wastes may affect the aerial extent and health of coastal kelp beds. The discharger shall participate with other ocean dischargers in the San Diego Region in an annual regional kelp bed photographic survey. Kelp beds shall be monitored annually by means of vertical aerial infrared photography to determine the maximum aerial extent of the region's coastal kelp beds within the calendar year. Surveys shall be conducted as close as possible to the time when kelp bed canopies cover the greatest area. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day. The images produced by the surveys shall be presented in the form of a 1:24,000 scale photo-mosaic of the entire San Diego Region coastline. Onshore

reference points, locations of all ocean outfalls and diffusers, and the 30-foot (MLLW) and 60-foot (MLLW) depth contours shall be shown. The aerial extent of the various kelp beds photographed in each survey shall be compared to that noted in surveys of previous years. Any significant losses which persist for more than one year shall be investigated by divers to determine the probable reason for the loss.

2. Strategic Process Studies.

Special studies are an integral part of the permit monitoring program. They differ from other elements of the monitoring program in that they are intended to be short-term and are designed to address specific research or management issues that are not addressed by the routine core monitoring elements.

The scope of the special studies shall be determined by the discharger in coordination with the Executive Officer and the USEPA. The discharger may include input from whatever sources they deem appropriate. Each year, the discharger shall submit proposals for strategic process studies to the Executive Officer and the USEPA by September 30, for the following year's monitoring effort (July through June). The following calendar year, detailed scopes of work for the proposals, including reporting schedules, shall, if requested by the Executive Officer, be presented by the discharger at a spring Regional Board meeting. Upon approval by the Executive Officer and the USEPA, the discharger shall implement the special study. Reporting requirements and deadlines for the results of the special project studies will be determined and set at the time of project approval. Strategic process studies conducted during the period of this permit shall be at a level of effort equal to that of Year 1, unless the Executive Officer, USEPA, and discharger agree otherwise.

The special studies for Year 1 of the permit include the following:

a. Evaluation of the current monitoring program. The discharger shall fund an independent scientific review of the existing ocean monitoring program. At a minimum this study will address the extent to which the program addresses the principles and elements outlined in the Model Monitoring Program for Large Ocean Discharges in Southern California. Additionally, the scientists conducting the study shall consider the concerns of the discharger, regulators, and non-government organizations (NGOs) with regard to program adequacy and its ability to assess impacts to the environment and or public health. The study will provide input for future monitoring program modifications and will identify potential key research needs that may form the framework for planning special project studies in future years.

b. Sediment mapping study. During Year 1 the discharger shall develop the scope for a study to identify the optimal sampling design to determine the spatial extent of any outfall effect on

sediments or benthic communities. The study is scheduled for the summer of 2004.

c. Remote Sensing. The discharger shall participate and coordinate with state and local agencies and other dischargers in the San Diego Region in the development and implementation of a remote sensing monitoring program for the trans-border ocean region. This remote sensing monitoring program is intended to identify and track (in near real time) the fate and transport of wastewater discharged through the Point Loma and South Bay ocean outfalls, wet weather runoff from the Tijuana River, and other sources of coastal sewage and stormwater plumes in the area. This program will focus on obtaining satellite and aircraft imagery in an area extending up to 100 Km North and 100 Km south of the US-Mexico Border and up to 15 Km offshore. The discharger shall provide both technical and financial assistance with this program. It is anticipated that this program will continue in future years.

3. Regional Monitoring.

The discharger shall participate in regional monitoring activities coordinated by the Southern California Coastal Water Project (SCCWRP). The procedures for Executive Officer and USEPA approval shall be the same as detailed above for the strategic process studies. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated sampling efforts, the discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The discharger has participated in regional monitoring efforts in 1994, 1998 and will be participating in the regional monitoring effort scheduled to begin in the summer of 2003 (Bight'03). The level of effort will provided to the Executive Officer and USEPA for approval.

During the 2003 regional survey, the discharger shall provide in-kind services in participating in all three components of the proposed regional monitoring activities as defined by the Bight'03 Steering Committee:

- Coastal Ecology (e.g., assessment of benthic sediment chemistry and macrofaunal communities, trawl-caught fish and invertebrate communities, tissue burden analyses of target pelagic and benthic species, sediment toxicity)
- Water Quality (e.g., offshore plume tracking associated with stormwater and riverine runoff from storm events, involving integration of remote sensing and collection of water

samples at sea; sampling events coordinated with Microbiology component)
- Microbiology (e.g., shoreline and surf zone microbiology tracking associated with storm events; sampling events coordinated with Water Quality component)

The discharger will be responsible for submitting the data collected during their portion of the regional monitoring program according to the prescribed schedule set by the Bight'03 Steering Committee. Detailed analysis of these data will not be required separately by the discharger since they will participate in the analysis and write-up of the complete results from the regional monitoring efforts. The final results, conclusions and recommendations of the project will be published as part of a comprehensive monitoring report for the Bight'03 regional monitoring survey.

It is anticipated that subsequent regional monitoring efforts will occur at 5-year intervals.

4. Reporting.

Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of this MRP shall include, as a minimum, the following information:

- 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.).

- A description of sampling stations, including differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.).

- A description of the sample collection and preservation procedures used in the survey.

- A description of the specific method used for laboratory analysis.

- An in-depth discussion of the results of the survey. All tabulations and computations shall be explained.

Annual reports will be due July 1st and will include detailed statistical analyses of all data. Methods may include, but are not limited to, various multivariate analyses such as cluster analysis, ordination, and regression. The discharger should also conduct additional analyses, as appropriate, to elucidate temporal and spatial trends in the data.

TABLE 1. INFLUENT AND EFFLUENT SAMPLING AND ANALYSIS REQUIREMENTS

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	**Effluent stream**	**Emergency connection**
flowrate	MGD	recorder/totalizer	Continuous	Continuous	Continuous
BOD_5@20^0C	mg/l	24 hr. composite	Daily	Daily	Weekly
volatile suspended solids	mg/l	24 hr. composite	Daily	Daily	Weekly
total dissolved solids	mg/l	24 hr. composite	Daily	Daily	Weekly
temperature	^0C	grab	Daily	Daily	Weekly
floating particulates	mg/l	24 hr. composite	Daily	Daily	Weekly
TABLE A parameters					
grease & oil	mg/l	grab	Daily	Daily	Weekly
total suspended solids	mg/l	24 hr. composite	Daily	Daily	Weekly
settleable solids	ml/l	grab	Daily	Daily	Weekly
turbidity	NTU	grab	Daily	Daily	Weekly
pH	units	grab	Daily	Daily	Weekly
Table B parameters for protection of marine aquatic life					
arsenic	µg/l	24 hr. composite	Weekly	Weekly	Weekly
cadmium	µg/l	24 hr. composite	Weekly	Weekly	Weekly
chromium (VI)[1]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
copper	µg/l	24 hr. composite	Weekly	Weekly	Weekly
lead	µg/l	24 hr. composite	Weekly	Weekly	Weekly
mercury	µg/l	24 hr. composite	Weekly	Weekly	Weekly
nickel	µg/l	24 hr. composite	Weekly	Weekly	Weekly
selenium	µg/l	24 hr. composite	Weekly	Weekly	Weekly
silver	µg/l	24 hr. composite	Weekly	Weekly	Weekly
zinc	µg/l	24 hr. composite	Weekly	Weekly	Weekly
cyanide	µg/l	24 hr. composite	Weekly	Weekly	Weekly
ammonia (as N)	mg/l	24 hr. composite	Weekly	Weekly	Weekly
acute toxicity	TUa	24 hr. composite	-	Semi-annually	-
chronic toxicity	TUc	24 hr. composite	-	Monthly	-
phenolic compounds (nonchlorinated)	µg/l	24 hr. composite	Weekly	Weekly	Weekly
phenolic compounds (chlorinated)	µg/l	24 hr. composite	Weekly	Weekly	Weekly
endosulfan	µg/l	24 hr. composite	Weekly	Weekly	Weekly
endrin	µg/l	24 hr. composite	Weekly	Weekly	Weekly

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	Effluent stream	Emergency connection
HCH[2]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
radioactivity	pci/l	24 hr. composite	Monthly	Monthly	Monthly
Table B parameters for protection of human health - non carcinogens					
acrolein	µg/l	grab	Monthly	Monthly	Monthly
antimony	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-chloroethoxy) methane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-chloroisopropyl) ether	µg/l	24 hr. composite	Monthly	Monthly	Monthly
chlorobenzene	µg/l	grab	Monthly	Monthly	Monthly
chromium (III)[1]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
di-n-butyl phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dichlorobenzenes[3]	µg/l	24 hr composite	Monthly	Monthly	Monthly
diethyl phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dimethyl phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
4,6-dinitro-2-methylphenol	µg/l	24 hr. composite	Monthly	Monthly	Monthly
2,4-dinitrophenol	µg/l	24 hr. composite	Monthly	Monthly	Monthly
ethylbenzene	µg/l	grab	Monthly	Monthly	Monthly
fluoranthene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachlorocyclopentadiene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
nitrobenzene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
thallium	µg/l	24 hr. composite	Monthly	Monthly	Monthly
toluene	µg/l	grab	Monthly	Monthly	Monthly
tributyltin	µg/l	24 hr. composite	Monthly	Monthly	Monthly
1,1,1-trichloroethane	µg/l	grab	Monthly	Monthly	Monthly
Table B parameters for protection of human health – carcinogens					
acrylonitrile	µg/l	grab	Monthly	Monthly	Monthly
aldrin	µg/l	24 hr. composite	Weekly	Weekly	Weekly
benzene	µg/l	grab	Monthly	Monthly	Monthly
benzidine	µg/l	24 hr composite	Monthly	Monthly	Monthly
beryllium	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-chloroethyl) ether	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-ethylhexyl) phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
carbon tetrachloride	µg/l	grab	Monthly	Monthly	Monthly
chlordane[5]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
chlorodibromomethane	µg/l	24 hr. composite	Monthly	Monthly	Monthly

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	Effluent stream	Emergency connection
chloroform	µg/l	grab	Monthly	Monthly	Monthly
DDT[6]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
1,4-dichlorobenzene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
3,3'-dichlorobenzidine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
1,2-dichloroethane	µg/l	grab	Monthly	Monthly	Monthly
1,1-dichloroethylene	µg/l	grab	Monthly	Monthly	Monthly
dichlorobromomethane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dichloromethane	µg/l	grab	Monthly	Monthly	Monthly
1,3-dichloropropene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dieldrin	µg/l	24 hr. composite	Weekly	Weekly	Weekly
2,4-dinitrotoluene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
1,2-diphenylhydrazine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
halomethanes[7]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
heptachlor	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hepthachlor epoxide	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachlorobenzene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachlorobutadiene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachloroethane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
isophorone	µg/l	24 hr. composite	Monthly	Monthly	Monthly
N-nitrosodimethylamine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
N-nitroso-di-N-propylamine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
N-nitrosdiphenylamine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
PAHs[8]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
PCBs[9]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
1,1,2,2-tetrachloroethane	µg/l	grab	Monthly	Monthly	Monthly
TCDD equivalents[10]	ρg/l	24 hr. composite	Monthly	Monthly	Monthly
tetrachloroethylene	µg/l	grab	Monthly	Monthly	Monthly
toxaphene	µg/l	24 hr. composite	Weekly	Weekly	Weekly
trichloroethylene	µg/l	grab	Monthly	Monthly	Monthly
1,1,2-trichloroethane	µg/l	grab	Monthly	Monthly	Monthly
2,4,6-trichlorophenol	µg/l	24 hr. composite	Monthly	Monthly	Monthly
vinyl chloride	µg/l	grab	Monthly	Monthly	Monthly
remaining "priority pollutants"	µg/l	24 hr. composite	Monthly	Monthly	Monthly

Table 1. Footnotes

1. The discharger may, at its option, meet the effluent limitation and effluent mass emission benchmark for chromium (VI) or chromium (III) as a total chromium limitation and benchmark.

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

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

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

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

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

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

8. 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.

9. 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.

10. TCDD equivalents shall mean the sum of the concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown in the table below. USEPA method 8280 may be used to analyze TCDD equivalence.

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

11. For sediment and fish tissue PCBs shall mean the sum of the following congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206. These represent concensus based numbers developed by agencies participating in offshore regional monitoring programs in Southern California. These 41 congeners are thought to represent the most-important PCB congeners in terms of mass and toxicity.

TABLE 2. SAMPLING OF RETURN STREAMS

Parameter	Units	Sample type	Sampling frequency
flowrate	MGD	recorder/totalizer	Continuous
total suspended solids	mg/l	24 hr. composite	Daily
BOD_5@20^0C	mg/l	24 hr. composite	Daily

TABLE 3. RECEIVING WATER MONITORING REQUIREMENTS

Parameter	Units	Sample Type	Sampling Frequency	
			Offshore stations	Kelp stations
visual observations	---	visual	quarterly	5x/month
temperature	^{o}C	profile	quarterly	5x/month
Salinity	ppt	profile	quarterly	5x/month
dissolved oxygen	mg/l	profile	quarterly	5x/month
light transmittance	%	profile	quarterly	5x/month
Chlorophyll *a*	m	profile	quarterly	5x/month
pH	units	profile	quarterly	5x/month
total and fecal coliforms	CFU/100 ml	grab	—	5x/month
enterococcus	CFU/100 ml	grab	quarterly	5x/month

TABLE 4. OFFSHORE AND KELP BED WATER QUALITY STATIONS (SEE FIGURE 1)

Offshore Stations	Depth (m)	N. Latitude	W. Longitude	Discrete depths for bacteria samples
F01	18	32° 38.10'	117° 14.41'	1 m, 12 m, 18 m
F02	18	32° 45.41'	117° 16.19'	1 m, 12 m, 18 m
F03	18	32° 46.96'	117° 16.06'	1 m, 12 m, 18 m
F04	60	32° 35.64'	117° 16.60'	1 m, 25 m, 60 m
F05	60	32° 36.72'	117° 16.67'	1 m, 25 m, 60 m
F06	60	32° 37.82'	117° 16.73'	1 m, 25 m, 60 m
F07	60	32° 39.07'	117° 16.80'	1 m, 25 m, 60 m
F08	60	32° 40.26'	117° 17.27'	1 m, 25 m, 60 m
F09	60	32° 41.12'	117° 17.51'	1 m, 25 m, 60 m
F10	60	32° 42.33'	117° 17.44'	1 m, 25 m, 60 m
F11	60	32° 43.53'	117° 17.68'	1 m, 25 m, 60 m
F12	60	32° 44.88'	117° 17.64'	1 m, 25 m, 60 m
F13	60	32° 45.95'	117° 18.02'	1 m, 25 m, 60 m
F14	60	32° 46.89'	117° 18.69'	1 m, 25 m, 60 m
F15	80	32° 35.65'	117° 18.04'	1 m, 25 m, 60 m, 80 m
F16	80	32° 36.72'	117° 18.14'	1 m, 25 m, 60 m 80 m
F17	80	32° 37.79'	117° 18.31'	1 m, 25 m, 60 m, 80 m
F18	80	32° 38.93'	117° 18.52'	1 m, 25 m, 60 m, 80 m
F19	80	32° 39.98'	117° 18.90'	1 m, 25 m, 60 m, 80 m
F20	80	32° 41.12'	117° 18.99'	1 m, 25 m, 60 m, 80 m
F21	80	32° 42.23'	117° 19.12'	1 m, 25 m, 60 m, 80 m
F22	80	32° 43.36'	117° 19.25'	1 m, 25 m, 60 m, 80 m
F23	80	32° 44.64'	117° 19.40'	1 m, 25 m, 60 m, 80 m
F24	80	32° 45.74'	117° 19.63'	1 m, 25 m, 60 m, 80 m
F25	80	32° 46.80'	117° 20.16'	1 m, 25 m, 60 m, 80 m
F26	98	32° 35.61'	117° 19.29'	1 m, 25 m, 60 m, 80 m, 98 m
F27	98	32° 36.72'	117° 19.02'	1 m, 25 m, 60 m, 80 m, 98 m
F28	98	32° 37.76'	117° 19.42'	1 m, 25 m, 60 m, 80 m, 98 m
F29	98	32° 38.87'	117° 19.50'	1 m, 25 m, 60 m, 80 m, 98 m
F30	98	32° 39.94'	117° 19.49'	1 m, 25 m, 60 m, 80 m, 98 m
F31	98	32° 41.08'	117° 19.70'	1 m, 25 m, 60 m, 80 m, 98 m
F32	98	32° 42.16'	117° 19.80'	1 m, 25 m, 60 m, 80 m, 98 m
F33	98	32° 43.30'	117° 19.93'	1 m, 25 m, 60 m, 80 m, 98 m
F34	98	32° 44.44'	117° 20.27'	1 m, 25 m, 60 m, 80 m, 98 m
F35	98	32° 45.48'	117° 20.97'	1 m, 25 m, 60 m, 80 m, 98 m
F36	98	32° 46.63'	117° 21.40'	1 m, 25 m, 60 m, 80 m, 98 m
Kelp Stations	**Depth (m)**	**N. Latitude**	**W. Longitude**	**Discrete depths for bacteria samples**
A1	18	32° 39.56'	117° 15.72'	1 m, 12 m, 18 m
A6	18	32° 41.56'	117° 16.18'	1 m, 12 m, 18 m
A7	18	32° 40.53'	117° 16.01'	1 m, 12 m, 18 m
C4	9	32° 39.95'	117° 14.98'	1 m, 3 m, 9 m
C5	9	32° 40.75'	117° 15.40'	1 m, 3 m, 9 m
C6	9	32° 41.62'	117° 15.68'	1 m, 3 m, 9 m
C7	18	32° 42.98'	117° 16.33'	1 m, 12 m, 18 m
C8	18	32° 43.96'	117° 16.40'	1 m, 12 m, 18 m

TABLE 5. LOCATION OF SHORELINE BACTERIA STATIONS (SEE FIGURE 1)

Station	N. Latitude	W. Longitude	Description
D4	32° 39.94'	117° 14.62'	Located at the southernmost tip of Point Loma just north of the lighthouse
D5	32° 40.85'	117° 14.94'	Directly in front of the Point Loma Wastewater Treatment plant where the outfall pipe enters the ocean
D7	32° 43.16'	117° 15.44'	Sunset Cliffs at the foot of the stairs seaward of Ladera Street
D8	32° 44.22'	117° 15.32'	Ocean Beach at the foot of the stairs seaward of Bermuda Street
D9	32° 44.80'	117° 15.24'	Just south of the Ocean Beach pier at the foot of the stairs seaward of Narragansett Street
D10	32° 44.95'	117° 15.18'	Ocean Beach just north of west end of Newport Avenue, directly west of main lifeguard station
D11	32° 45.24'	117° 15.16'	North Ocean Beach (Dog Beach), directly west of south end of Dog Beach parking area at Voltaire St terminus, south side of stub jetty
D12	32° 46.28'	117° 15.21'	Mission Beach, directly west of main lifeguard station in Belmont Park located at the west end of Mission Bay Drive

TABLE 6. LOCATION OF OFFSHORE SEDIMENT STATIONS (SEE FIGURE 2)

Primary Core Stations	Depth (m)	N. Latitude	W. Longitude	Descriptor
B9	98	32° 45.33'	117° 21.70'	10.5 Km north of diffuser "Y"
B12	98	32° 46.36'	117° 22.30'	12.7 Km north of diffuser "Y"
E2	98	32° 37.45'	117° 19.09'	4.6 Km south of diffuser "Y"
E5	98	32° 38.38'	117° 19.28'	3.1 Km south of diffuser "Y"
E8	98	32° 38.91'	117° 19.34'	2.1 Km south of diffuser "Y"
E11	98	32° 39.40'	117° 19.42'	1.2 Km south of diffuser "Y"
E14	98	32° 39.94'	117° 19.49'	0.3 Km west of diffuser "Y"
E17	98	32° 40.48'	117° 19.54'	0.9 Km north of diffuser "Y"
E20	98	32° 40.96'	117° 19.67'	1.8 Km north of diffuser "Y"
E23	98	32° 41.47'	117° 19.77'	2.7 Km north of diffuser "Y"
E25	98	32° 42.38'	117° 20.07'	4.5 Km north of diffuser "Y"
E26	98	32° 43.82'	117° 20.57'	7.3 Km north of diffuser "Y"
Secondary Core Stations	**Depth (m)**	**N. Latitude**	**W. Longitude**	**Descriptor**
B8	88	32° 45.50'	117° 20.77'	
B11	88	32° 46.57'	117° 21.35'	
E1	88	32° 37.53'	117° 18.35'	
E7	88	32° 39.00'	117° 18.65'	
E19	88	32° 41.04'	117° 19.18'	
B10	116	32° 45.22'	117° 22.16'	
E3	116	32° 37.29'	117° 20.09'	
E9	116	32° 38.75'	117° 20.06'	
E15	116	32° 39.88'	117° 19.91'	
E21	116	32° 40.89'	117° 20.00'	

TABLE 7. OFFSHORE SEDIMENT MONITORING REQUIREMENTS

Parameter	Units	Sample type	Frequency
Sediment grain size	µm	grab	semiannual
Total Organic Carbon	%	grab	semiannual
Total Nitrogen	%	grab	semiannual
Acid soluble sulfides	mg/kg	grab	semiannual
Metals			
Aluminum	mg/kg	grab	semiannual
Antimony	mg/kg	grab	semiannual
Arsenic	mg/kg	grab	semiannual
Cadmium	mg/kg	grab	semiannual
Chromium	mg/kg	grab	semiannual
Copper	mg/kg	grab	semiannual
Iron	mg/kg	grab	semiannual
Lead	mg/kg	grab	semiannual
Manganese	mg/kg	grab	semiannual
Mercury	mg/kg	grab	semiannual
Nickel	mg/kg	grab	semiannual
Selenium	mg/kg	grab	semiannual
Silver	mg/kg	grab	semiannual
Tin	mg/kg	grab	semiannual
Zinc	mg/kg	grab	semiannual
PCBs and Chlorinated Pesticides			
PCBs[11]	ng/kg	grab	semiannual
2,4'-DDD	ng/kg	grab	semiannual
4,4'-DDD	ng/kg	grab	semiannual
2,4'-DDE	ng/kg	grab	semiannual
4,4'-DDE	ng/kg	grab	semiannual
2,4'-DDT	ng/kg	grab	semiannual
4,4'-DDT	ng/kg	grab	semiannual
Aldrin	ng/kg	grab	semiannual
alpha-Chlordane	ng/kg	grab	semiannual
Dieldrin	ng/kg	grab	semiannual
Endosulfan	ng/kg	grab	semiannual
Endrin	ng/kg	grab	semiannual
gamma-BHC	ng/kg	grab	semiannual
Heptachlor	ng/kg	grab	semiannual
Heptachlor epoxide	ng/kg	grab	semiannual
Hexachlorobenzene	ng/kg	grab	semiannual
Mirex	ng/kg	grab	semiannual
Trans-nonachlor	ng/kg	grab	semiannual

Polycyclic Aromatic Hydrocarbons			
Acenapthene	µg/kg	grab	semiannual
Acenaphthylene	µg/kg	grab	semiannual
Anthracene	µg/kg	grab	semiannual
Benz(a)anthracene	µg/kg	grab	semiannual
Benzo(b)fluoranthene	µg/kg	grab	semiannual
Benzo(k)fluoranthene	µg/kg	grab	semiannual
Benzo(ghi)pyrelene	µg/kg	grab	semiannual
Benzo(a)pyrene	µg/kg	grab	semiannual
Benzo(e)pyrene	µg/kg	grab	semiannual
Biphenyl	µg/kg	grab	semiannual
Chrysene	µg/kg	grab	semiannual
Dibenz(ah)anthracene	µg/kg	grab	semiannual
Fluoranthene	µg/kg	grab	semiannual
Fluorene	µg/kg	grab	semiannual
Indeno(123cd)pyrene	µg/kg	grab	semiannual
Naphthalene	µg/kg	grab	semiannual
1-Methylnaphthalene	µg/kg	grab	semiannual
2-Methylnaphthalene	µg/kg	grab	semiannual
2,6-Dimethylnaphthalene	µg/kg	grab	semiannual
2,3,5-Trimethylnaphthalene	µg/kg	grab	semiannual
Perylene	µg/kg	grab	semiannual
Phenanthrene	µg/kg	grab	semiannual
1-Methylphenanthrene	µg/kg	grab	semiannual
Pyrene	µg/kg	grab	semiannual

TABLE 8. LOCATION OF TRAWL AND RIG FISH STATIONS (SEE FIGURE 3)

Station	Depth (m)	N. Latitude	W. Longitude
SD7 (Zone 4)	100	32° 35.06'	117° 18.39'
SD8 (Zone 3)	100	32° 37.54'	117° 19.37'
SD10 (Zone 1)	100	32° 39.16'	117° 19.50'
SD12 (Zone 1)	100	32° 40.65'	117° 19.81'
SD13 (Zone 2)	100	32° 42.83'	117° 20.25'
SD14 (Zone 2)	100	32° 44.30'	117° 20.96'
Rig fish stations shall be located in an area centered around the following sites			
RF1 (Zone 1)	107	32° 40.32'	117° 19.78'
RF2 (Zone 2)	96	32° 45.67'	117° 22.02'

TABLE 9. FISH TISSUE ANALSYES

Station type	Tissue type	Analyte	Candidate species
trawl stations	liver	Lipids PCB congeners Chlorinated pesticides Trace metals (arsenic, mercury, selenium)	<u>Primary target species</u> Longfin sanddab Pacific sanddab <u>Secondary target species</u> Other flatfish (e.g., bigmouth sole, hornyhead turbot, Dover sole, English sole) Rockfish (e.g., *Sebastes* spp)
rig stations	muscle	Lipids PCB congeners Chlorinated pesticides Trace metals (arsenic, cadmium, chromium, copper, lead, mercury, selenium, tin, zinc)	<u>Primary target species</u> Vermilion rockfish Copper rockfish <u>Secondary target species</u> Other rockfish (e.g., *Sebastes* spp)

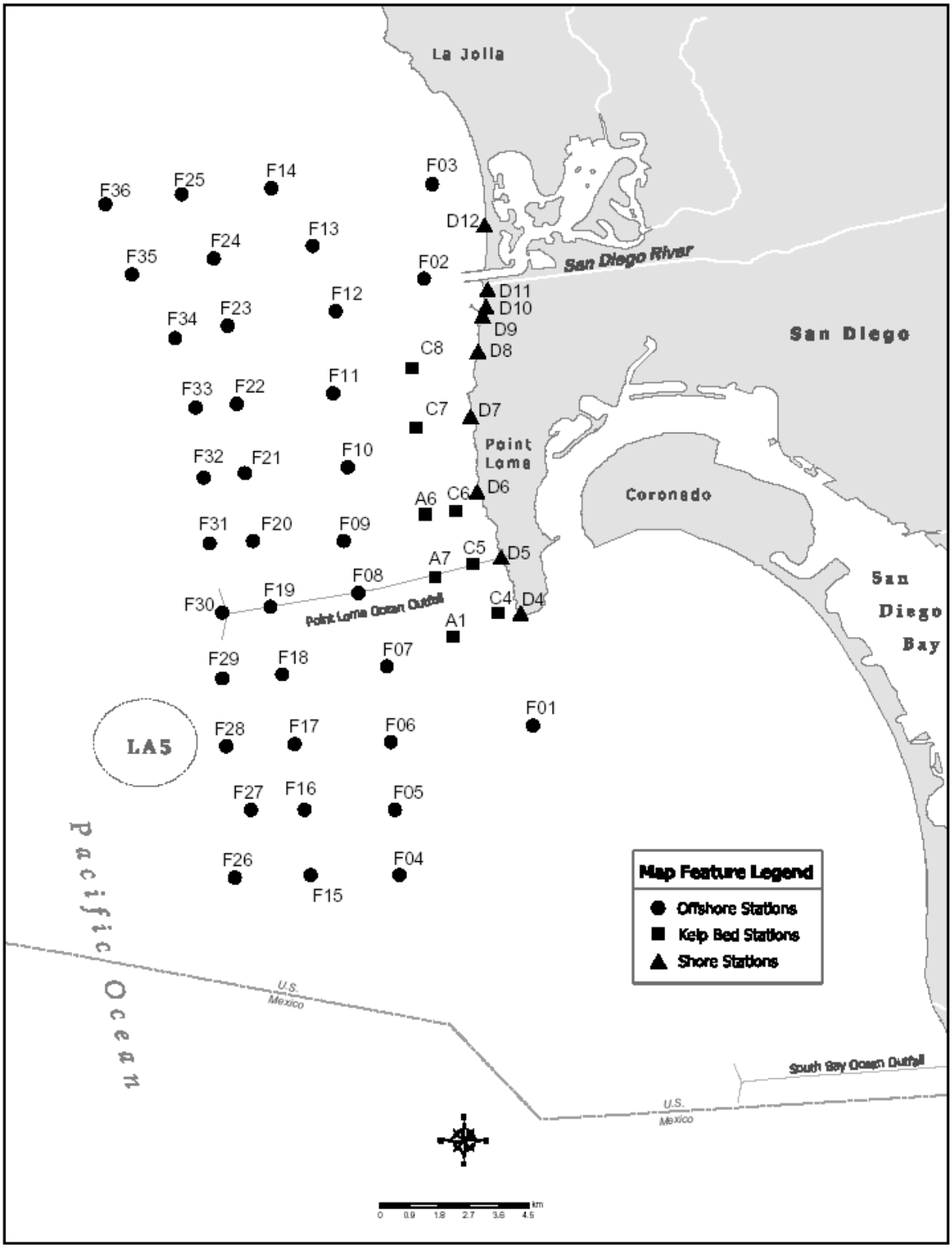

FIGURE 1.
Locations of shore, kelp bed, and offshore water quality monitoring stations surrounding the City of San Diego Point Loma Ocean Outfall

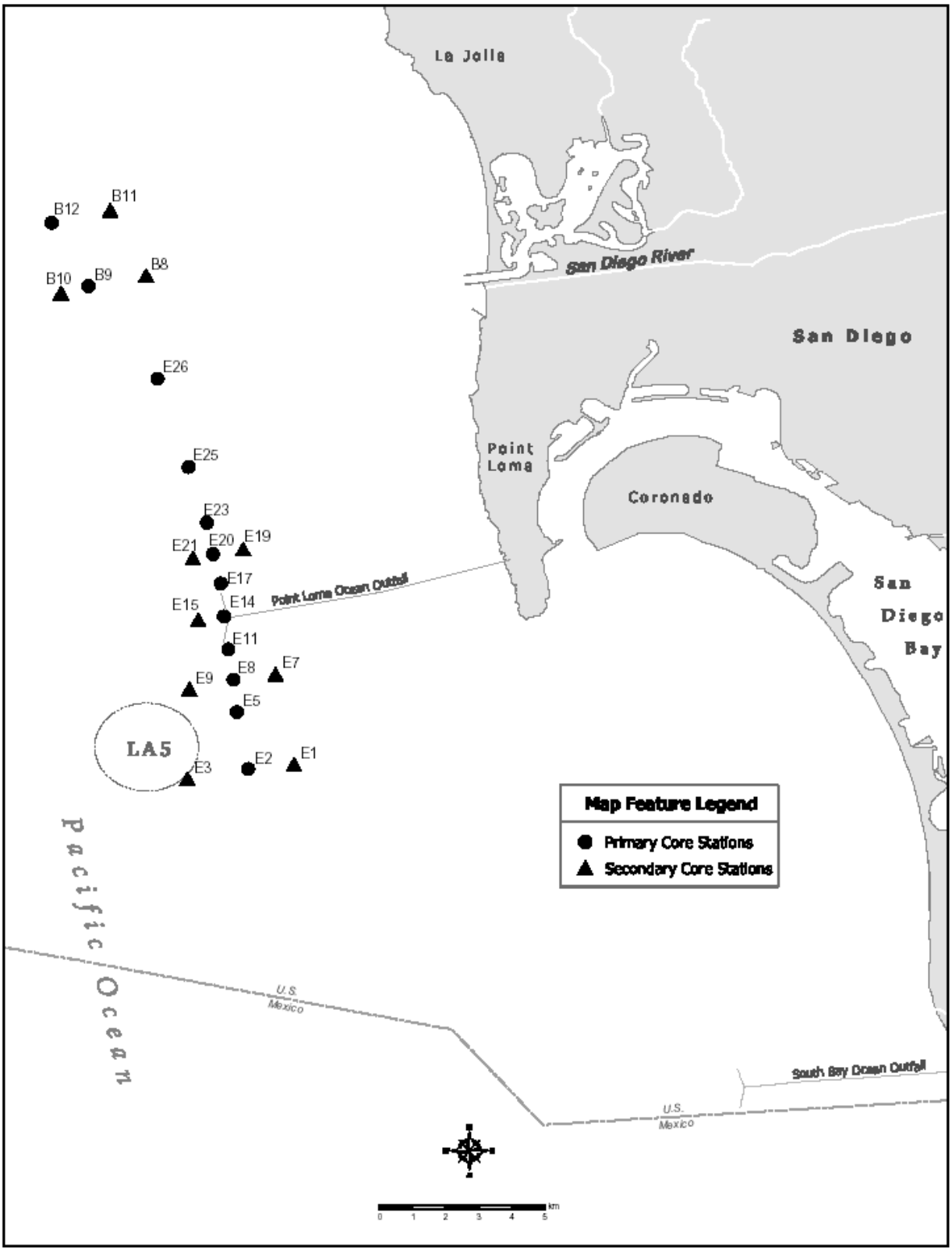

FIGURE 2.
Locations of benthic sediment and infauna monitoring stations surrounding the City of San Diego Point Loma Ocean Outfall

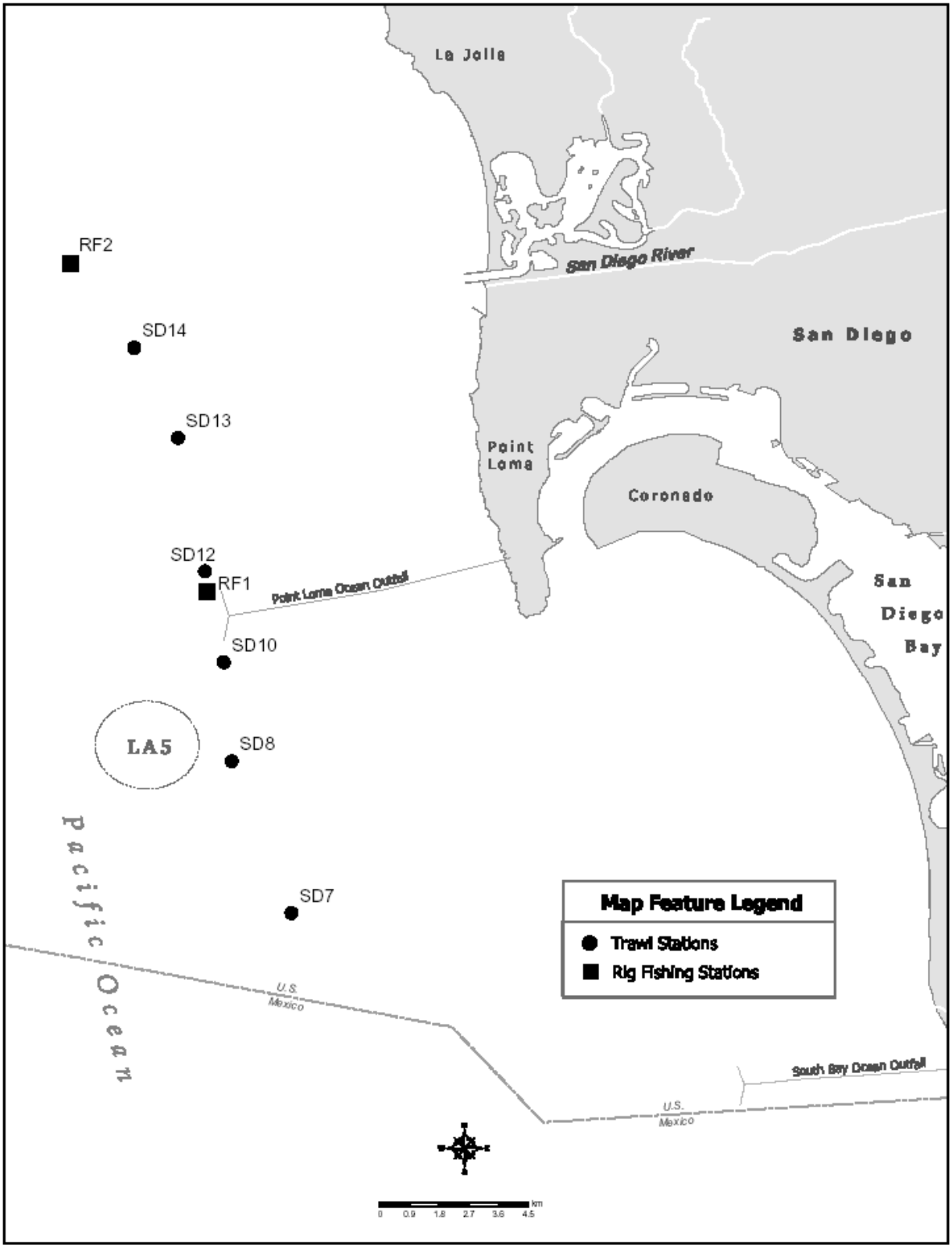

FIGURE 3.
Locations of trawl and rig fishing stations surrounding the City of San Diego Point Loma Ocean Outfall

This certifies that the foregoing is a full, true, and correct copy of Addendum No. 1 to Order No. R9-2002-0025, NPDES Permit No. CA0107409 adopted by the California Regional Water Quality Control Board, San Diego Region, on June 11, 2003 and issued by the United States Environmental Protection Agency, Region IX, on June 25, 2003.

JOHN H. ROBERTUS
Executive Officer
California Regional Water Quality Control Board
San Diego Region

for CATHERINE KUHLMAN
Acting Director
Water Division
U. S. Environmental Protection Agency
Region IX

For the Regional Administrator

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

2002 OCT 10 P 12:29

Reply to:
WTR-5

OCT 10 2002

Mr. Scott Tulloch, Director
City of San Diego
Metropolitan Wastewater Department
9192 Topaz Way
San Diego, CA 92123

Dear Mr. Tulloch:

This correspondence provides notice of modification of the final National Pollutant Discharge Elimination System (NPDES) permit, incorporating federal requirements pursuant to § 301(h) of the Clean Water Act, for the E.W. Blom Point Loma Wastewater Treatment Plant (NPDES Permit No. CA0107409). This permit was issued by the U.S. Environmental Protection Agency (EPA) on September 13, 2002.

It has been brought to our attention that Page 8, Finding 16, in the final permit contains typographical errors, in that the last two sentences and accompanying footnote of Finding 16 in the publicly noticed draft permit were inadvertently altered in the final permit. (Revisions made to Finding 16 by the draft permit errata sheet, dated April 10, 2002, are unaffected by today's action.) A chronology of these revisions is provided as an attachment to this correspondence.

Consequently, pursuant to 40 CFR 122.63, we are issuing a minor modification to the final permit. This modification wholly replaces Finding 16 of the final permit with the following:

> The City has implemented a reclamation program with a system capacity of 45 MGD of reclaimed wastewater with the addition of the SBWRP. This meets the requirement for reclaimed water capacity of 45 MGD in § 301(j)(5) of the CWA. In addition, on a system-wide basis, the City will remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of the BOD_5 (on an annual average) in the discharge to which this application applies. The City also proposes to decrease the suspended solids mass emissions. The City's permit application satisfies § 301(j)(5) of the CWA.[1]
>
> [1]This permit is issued without prejudice to the rights of any party to address the legal issue of the applicability of 33 U.S.C. § 1311(j)(5) to the City's future NPDES permits.

A revised page 8 which incorporates this correction is enclosed with this correspondence.

If you have any questions regarding this correspondence, please call Robyn Stuber, of my staff, at 415/972-3524.

Sincerely,

Cat Kuhlman

Cat Kuhlman, Acting Director
Water Division

Enclosures

cc: See distribution list

Attachment

Chronology for Minor Modification of Final Permit

1) Publicly noticed draft permit of February 11, 2002:

Page 8, Finding 16 – With the addition of the South Bay Reclamation plant, the City has implemented a wastewater reclamation program that has achieved a system capacity of 45 MGD of reclaimed wastewater by January 1, 2010. In addition, on a system-wide basis, the City will remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of the BOD_5 (on an annual average) in the discharge to which this application applies. The City also proposes to decrease the suspended solids mass emissions. The City's permit application satisfies § 301(j)(5) of the CWA.[1]

[1]This permit is issued without prejudice to the rights of any party to address the legal issue of the applicability of 33 U.S.C. § 1311(j)(5) to the City's future NPDES permits.

2) Errata Sheet of April 10, 2002:

Page 8, Finding 16, first sentence – Changed as follows: "~~With the addition of the South Bay Reclamation Plant, the City has implemented a wastewater reclamation program that has achieved a system capacity of 45 MGD of reclaimed wastewater by January 1, 2020.~~ The City has implemented a reclamation program with a system capacity of 45 MGD of reclaimed wastewater with the addition of the SBWRP. This meets the requirement for reclaimed water capacity of 45 MGD in § 301(j)(5) of the Clean Water Act."

3) Final permit of September 13, 2002:

Page 8, Finding 16 – The City has implemented a reclamation program with a system capacity of 45 MGD of reclaimed wastewater with the addition of the SBWRP. This meets the requirement for reclaimed water capacity of 45 MGD in § 301(j)(5) of the CWA. In addition, on a system-wide basis, the City will remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of the BOD_5 (on an annual average) in the discharge to which this application applies. The City's permit application satisfies §§ 301(j)(5)(B)(i) and (j)(5)(C) of the CWA.

4) Minor modification of final permit:

Page 8, Finding 16 – The City has implemented a reclamation program with a system capacity of 45 MGD of reclaimed wastewater with the addition of the SBWRP. This meets the requirement for reclaimed water capacity of 45 MGD in § 301(j)(5) of the CWA. In addition, on a system-wide basis, the City will remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of the BOD_5 (on an annual average) in the discharge to which this application applies. The City also proposes to decrease the suspended solids mass emissions. The City's permit application satisfies § 301(j)(5) of the CWA.[1]

[1]This permit is issued without prejudice to the rights of any party to address the legal issue of the applicability of 33 U.S.C. § 1311(j)(5) to the City's future NPDES permits.

k. Spawning, reproduction, and/or early development
l. Shellfish harvesting
m. Wildlife habitat

The Basin Plan relies primarily on the requirements of the Ocean Plan for protection of these beneficial uses; however, the Basin Plan establishes additional water quality objectives for dissolved oxygen and pH.

14. Numeric effluent limitations for non-301(h) pollutant parameters discharged through the PLOO are established based on Ocean Plan quality requirements for waste discharges.

15. Order No. 95-106 contained mass emission benchmarks for effluent discharged through the PLOO. These benchmarks were established to address the uncertainty due to projected increases in toxic pollutant loadings from the PLMWTP to the marine environment during the five-year 301(h) modification, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with antidegradation requirements at the time of permit reissuance. Based on a review of effluent data collected during the previous permit term, the benchmarks contained in Order No. 95-106 are retained in Order No. R9-2002-0025, with minor revisions.

Mass emission benchmarks are not water quality-based effluent limitations and are not enforceable, as such. Annual mass emission benchmarks were determined using 1990 through April 1995 n-day average monthly performance (95th percentile) of the PLMWTP and the City's projected end-of-permit flow of 205 MGD (see 1995 application). Due to increases in source water concentrations in the City's imported potable water supply, mass emission benchmarks for copper and selenium were determined using 1994 n-day average monthly performance (95th percentile) of the PLMWTP and the City's projected end-of-permit flow of 205 MGD. The mass emission benchmark for cyanide has been corrected from the previous permit term. Average monthly performance was calculated as outlined in *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, 1991; TSD), Appendix E.

16. The City has implemented a reclamation program with a system capacity of 45 MGD of reclaimed wastewater with the addition of the SBWRP. This meets the requirement for reclaimed water capacity of 45 MGD in § 301(j)(5) of the CWA. In addition, on a system-wide basis, the City will remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of the BOD_5 (on an annual average) in the discharge to which this application applies. The City also proposes to decrease the suspended solids mass emissions. The City's permit application satisfies § 301(j)(5) of the CWA.[1]

17. The City's renewal of a modification from secondary treatment requirements pursuant to Section 301(h) of the CWA is contingent upon:

[1]This permit is issued without prejudice to the rights of any party to address the legal issue of the applicability of 33 U.S.C. § 1311(j)(5) to the City's future NPDES permits.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Reply to:
WTR-5

September 12, 2002

2002 SEP 19 P 12: 27

Mr. Scott Tulloch, Director
City of San Diego
Metropolitan Wastewater Department
9192 Topaz Way
San Diego, CA 92123

Dear Mr. Tulloch:

This correspondence provides notice of issuance of a final National Pollutant Discharge Elimination System (NPDES) permit incorporating federal requirements pursuant to Section 301(h) of the Clean Water Act issued by the U.S. Environmental Protection Agency (EPA) for the following discharge: E.W. Blom Point Loma Wastewater Treatment Plant (NPDES Permit No. CA0107409). This notification will be mailed on September 13, 2002, following signature of the final permit on that date.

The EPA's draft NPDES permit and California's tentative waste discharge requirements (order) and monitoring and reporting program (MRP) were public noticed on February 11, 2002. A joint public hearing was held in San Diego on March 13, 2002 and the San Diego Regional Water Quality Control Board (Regional Board) issued Order No. R9-2002-0025 and MRP No. R9-2002-0025 on April 10, 2002. Subsequently, the order was appealed to the California State Water Resources Control Board (State Board). On August 15, 2002, paragraph B.1.a.(1) of Order No. R9-2002-0025 was amended by State Board Order No. WQO 2002-0013. Order No. R9-2002-0025, as amended by Order No. WQO 2002-0013, and MRP No. R9-2002-0025 shall serve as the EPA's final NPDES permit. This permit does not differ significantly from that previously proposed.

Enclosed are copies of the final 301(h) permit and fact sheet, and the Regional Administrator's final 301(h) decision letter. This permit shall become effective 33 days from date of signature by the Regional Administrator (October 16, 2002). A petition may be filed with the Environmental Appeals Board to review any condition of the permit decision. Those persons filing a petition must have filed comments on the draft permit, or participated in the public hearing. Otherwise, any such petition for administrative review may be filed only to the extent of changes from the draft to the final permit decision. Petitions to the Environmental Appeals Board must be filed by October 16, 2002 (see 40 CFR 124.19(a) and 124.20(d)) and must meet the requirements of 40 CFR 124.19.

All filings of petitions that are sent through the U.S. Postal Service (except by Express Mail) must be addressed to the EAB's mailing address: U.S. Environmental Protection Agency; Clerk of the Board, Environmental Appeals Board (MC 1103B); Ariel Rios Building; 1200 Pennsylvania Avenue, N.W.; Washington, D.C. 20460-0001. Filings that are hand-carried in person, delivered via courier, mailed by Express Mail, or delivered by a non-U.S. Postal Service carrier (e.g., Federal Express or UPS) must be delivered to: U.S. Environmental Protection Agency; Clerk of the Board, Environmental Appeals Board; 607 14th Street, N.W., Suite 500; Washington, D.C. 20005. Also, a copy of the filed petition should be addressed to: Regional Administrator; U.S. Environmental Protection Agency, Region 9; Attn: Permits Record Coordinator, WTR-5; 75 Hawthorne Street; San Francisco, CA 94105-3901.

If you have any questions regarding this correspondence, please call Robyn Stuber, of my staff, at 415/972-3524.

Sincerely,

Terry Oda, Chief
CWA Standards and Permits Office

Enclosures

cc: See distribution list

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

OFFICE OF THE
REGIONAL ADMINISTRATOR

In Re:

CITY OF SAN DIEGO'S POINT LOMA WASTEWATER TREATMENT PLANT, APPLICATION FOR A MODIFIED NPDES PERMIT UNDER SECTION 301(h) OF THE CLEAN WATER ACT	FINAL DECISION OF THE REGIONAL ADMINISTRATOR PURSUANT TO 40 CFR PART 125, SUBPART G

It is my final decision to grant the request by the City of San Diego for a modified National Pollutant Discharge Elimination System (NPDES) permit under section 301(h) of the Clean Water Act. Section 301(h) provides for a variance from the secondary treatment requirements of the Clean Water Act. The basis for this decision is described in the EPA Tentative Decision Document (TDD) and Fact Sheet for the permit for City of San Diego's Point Loma Wastewater Treatment Plant and Ocean Outfall.

EPA received the City of San Diego's 301(h) renewal application on April 10, 2001. A tentative decision to approve the application was issued by EPA on February 8, 2002. On February 11, 2002, the EPA and the California Regional Water Quality Control Board, San Diego Region (Regional Board), jointly proposed issuance of a draft 301(h)-modified NPDES permit incorporating both federal NPDES requirements and State waste discharge requirements. A public hearing regarding the draft NPDES permit was held on March 13, 2002, at which time verbal and written testimony was presented by the public. On April 5, 2002, EPA and the Regional Board revised the draft permit based in part on public comments. On April 10, 2002, the Regional Board modified the waste discharge requirements (Order No. R9-2002-0025) to reduce the permitted loadings of suspended solids. The City appealed the Regional Board's modification of the mass emission limits (May 9, 2002) to the State Water Resources Control Board (State Board). The State Board found that the Regional Board had failed to make findings to justify the reduction. Therefore, the State Board on August 15, 2002 changed the permit to reflect the mass emission limits originally specified in the April 5, 2002 draft permit.

On April 8, 2002, the California Coastal Commission (CCC) objected to the City of San Diego's coastal zone management consistency certification. On May 8, 2002, the City appealed the CCC's consistency objection to the Secretary of Commerce. As a result of the final action taken by the State Board, the City resubmitted their coastal consistency request to the CCC. The CCC approved the consistency certification on September 9, 2002.

The City has met all the requirements for EPA's approval of the Section 301(h) variance. The permit shall be issued upon the date of signature by EPA (September 13, 2002) and shall become effective on October 16, 2002. A petition may be filed with the Environmental Appeals Board (EAB) to review any condition of the permit decision. Those persons filing a petition must have filed comments on the draft permit, or participated in the public hearing. Otherwise, any such petition for administrative review may be filed only to the extent of changes from the draft to the final permit decision. Petitions to the EAB must be filed by October 16, 2002 (see 40 CFR 124.19(a) and 124.20(d)) and must meet the requirements of 40 CFR 124.19.

All filings of petitions that are sent through U.S. Postal Service (except by Express Mail) must be addressed to the EAB's mailing address: U.S. Environmental Protection Agency; Clerk of the Board, Environmental Appeals Board (MC 1103B); Ariel Rios Building; 1200 Pennsylvania Avenue, N.W.; Washington, D.C. 20460-0001. Filings that are hand-carried in person, delivered via courier, mailed by Express Mail, or delivered by a non-U.S. Postal Service carrier (e.g., Federal Express or UPS) must be delivered to: U.S. Environmental Protection Agency; Clerk of the Board, Environmental Appeals Board; 607 14th Street, N.W., Suite 500; Washington, D.C. 20005. Also, a copy of the filed petition should be addressed to: Regional Administrator; U.S. Environmental Protection Agency, Region 9; Attn: Permits Record Coordinator, WTR-5; 75 Hawthorne Street; San Francisco, CA 94105-3901.

Dated: September 13 2002

Wayne Nastri
Regional Administrator

NPDES Permit No. CA0107409

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 *et seq.*),

City of San Diego
Metropolitan Wastewater Department
9192 Topaz Way
San Diego, CA 92123

is authorized to discharge treated effluent from the E. W. Blom Point Loma Metropolitan Wastewater Treatment Plant, located at 1902 Gatchell Road, in the City of San Diego, California, through the Point Loma Ocean Outfall to the Pacific Ocean, at:

Discharge No.	Latitude	Longitude
001	32° 39' 55" N	117° 19' 25" W

in accordance with prohibitions, discharge specifications, limitations, and other requirements and conditions set forth in the attached State orders referenced below.

On April 10, 2002, the California Regional Water Quality Control Board, San Diego Region, issued waste discharge requirements Order No. R9-2002-0025 and Monitoring and Reporting Program No. R9-2002-0025. On August 15, 2002, paragraph B.1.a.(1) of Order No. R9-2002-0025 was amended by California State Water Resources Control Board Order No. WQO 2002 – 0013, to read:

> "The discharge shall achieve a mass emission of TSS of no greater than ~~13,995~~ 15,000 mt/yr; this requirement shall be effective through December 31, 2005. Effective January 1, 2006, the discharger shall achieve a mass emission of TSS of no greater than 13, 599 mt/yr." [The remainder of the paragraph is unchanged.]

Order No. R9-2002-0025, as amended by Order No. WQO 2002 – 0013, and Monitoring and Reporting Program No. R9-2002-0025 shall serve as the NPDES permit for the discharge described above. This NPDES permit shall become effective 33 days from the date of signature by the Regional Administrator, and shall expire five years from its effective date, at midnight.

Signed this 13th day of September, 2002.

For the Regional Administrator

Alexis Strauss

Alexis Strauss, Director
Water Division

Winston H. Hickox
Secretary for Environmental Protection

State Water Resources Control Board

Office of Chief Counsel
1001 I Street, 22nd Floor, Sacramento, California 95814
P.O. Box 100, Sacramento, California 95812-0100
(916) 341-5161 ♦ FAX (916) 341-5199 ♦ www.swrcb.ca.gov

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov.

AUG 2 1 2002

CERTIFIED MAIL

James J. Dragna, Esq.
McCutchen, Doyle, Brown & Enersen
355 South Grand Avenue, Suite 4400
Los Angeles, CA 90071-3106

Dear Mr. Dragna:

PETITION OF CITY OF SAN DIEGO (WASTE DISCHARGE REQUIREMENTS ORDER NO. R9-2002-0025 [NPDES NO. CA0107409] FOR E.W. BLOM POINT LOMA WASTEWATER TREATMENT PLANT), SAN DIEGO REGION: ADOPTED ORDER
SWRCB/OCC FILE A-1477

Enclosed is a copy of WQO 2002 – 0013. This Order was adopted by the State Water Resources Control Board at its regular business meeting on August 15, 2002.

Sincerely,

Craig M. Wilson
Chief Counsel

Enclosure

cc: Mr. John Robertus, Executive Officer
San Diego Regional Water Quality Control Board
9771 Clairemont Mesa Boulevard, Suite A
San Diego, CA 92124-1324

Interested Persons Mailing List

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQO 2002 - 0013

In the Matter of the Petition of

City Of San Diego
(Waste Discharge Requirements Order No. R9-2002-0025 [NPDES No. CA0107409]
for E.W. Blom Point Loma Wastewater Treatment Plant

Issued by the
California Regional Water Quality Control Board,
San Diego Region

SWRCB/OCC FILE A-1477

BY THE BOARD:

The California Regional Water Quality Control Board, San Diego Region (Regional Board), adopted waste discharge requirements for the E.W. Blom Point Loma Metropolitan Wastewater Treatment Plant (Plant), owned and operated by the City of San Diego (City). Those requirements were adopted in conjunction with the renewal of the NPDES permit issued by the United States Environmental Protection Agency (EPA) for discharge to the Pacific Ocean pursuant to a process set forth in the Clean Water Act, title 33 of the United States Code Annotated Section 1311(h), and generally referred to as Section 301(h). Pursuant to Section 301(h), EPA may issue a permit for discharge to marine waters from a publicly owned treatment works (POTW) that is given less than full secondary treatment.[1] The federal permit may only be issued with the concurrence of the state in which the discharge takes place. In

[1] In 1972, Congress passed the Federal Water Pollution Control Act Amendments, which required publicly owned treatment works to achieve secondary treatment capability by 1977. After passage, some municipalities with POTWs that discharged into marine waters, argued that this requirement might be unnecessary on the grounds that marine POTWs usually discharge into deeper waters with large tides and substantial currents, which allow for greater dilution and dispersion than their freshwater counterparts. As a result, Congress added Section 301(h) to the Clean Water Act in 1977, allowing for a case-by-case review of treatment requirements for marine dischargers that applied by September 13, 1979. Although it was filed after the deadline, the City's application was accepted.

California, that concurrence takes the form of state-issued waste discharge requirements, a separate permit that ensures compliance with state water quality standards.

I. BACKGROUND

The City has operated the Plant for nearly forty years. A waiver pursuant to Section 301(h) was issued in December 1995. An application to renew the waiver was submitted to EPA by the City in April 2001. On March 13, 2002, the Regional Board conducted a joint hearing with a representative of EPA to take testimony concerning the Section 301(h) waiver and the waste discharge requirements. On April 10, 2002, the Regional Board reconvened to discuss the evidence and testimony and to vote on the adoption of the waste discharge requirements. No further public testimony was permitted. After a lengthy discussion, the Regional Board adopted the waste discharge requirements as proposed but made three changes to the order, only one of which is the subject of the City's petition.

The City filed a timely petition objecting to the procedure used by the Regional Board in adopting the order and to the reduction in the mass emission limits for total suspended solids (TSS) in the final order. Those limits were set at 15,000 metric tons per year in the 1995 permit but were reduced to just under 14,000 tons in the final order.

II. CONTENTION AND FINDING[2]

Contention: The decision of the Regional Board to reduce the mass emission limits for TSS from 15,000 to 13,995 metric tons per year for the first four years of the permit is not supported by evidence in the record.

Finding: While there is no evidence in the record that the City will, under any reasonable set of circumstances, exceed the limits set by the Regional Board, the record does not contain evidence that the reduction from 15,000 metric tons per year to 13,995 is based on actual water quality considerations.

The City has been operating the Plant since the early 1960s and has been subject to regulation by the Regional Board for essentially that entire time. When the first Section 301(h) waiver was issued in 1995, the Regional Board set a discharge limit of 15,000 metric tons per year of TSS in its waste discharge requirements. At the time, the Plant was discharging a

[2] The City raises numerous procedural issues in its petition. Because of the disposition of this matter, it is unnecessary to address any of those issues. *People v. Barry* (1987) 194 Cal.App.3d 158 (239 Cal.Rptr. 349.)

little less than 11,000 tons per year. Since then, the Plant has succeeded in reducing the amount of TSS discharged almost every year, despite considerable growth in its service area. In 1996, the discharge of TSS was 10,622 metric tons per year; in 1997, it was 10,183; in 1998, the number was 10,469; in 1999, the discharge was down to 9,188; and in 2000, the Plant only discharged 8,888 metric tons of TSS. That represents a 16 percent reduction over five years. Nevertheless, the City, in its application to renew the Section 301(h) waiver, told both EPA and the Regional Board that its discharge of TSS from the Plant would be 14,100 metric tons in 2001 going up steadily to 14,600 tons in 2005. The waste discharge requirements provide, and the City has not challenged the provision, that the discharge must be no more than 13,599 tons in 2006. No explanation has been provided for why the City's discharge from the Plant would increase 59 percent between 2000 and 2001 nor is there any explanation of what the City will do between 2005 and 2006 to reduce its discharge by 7 percent.

The record indicates that the Plant removes more than 85 percent of the TSS in its effluent stream.[3] No testimony or evidence was offered to show that this removal rate could not be assumed for the duration of this permit. At that rate of removal, even if the Plant were to operate at its full design capacity of 240 million gallons per day (MGD), the Regional Board has calculated that the mass emissions discharge would be less than 13,900 metric tons. As the City has projected the actual flow for the Plant in the year 2006 to be only 195 MGD, continued operation at the current rate of efficiency ought to result in a discharge of slightly more than 11,000 tons in that year.[4]

Nevertheless, the Regional Board's decision to reduce the limit for TSS mass emissions by 6.7 percent must be supported by evidence in the record. EPA approved the permit with the 15,000 ton limit.[5] Regional Board staff proposed adoption of the permit with the 15,000 ton limit. No evidence was offered to the Regional Board that a significant water quality impact

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[3] In its submittal to EPA in support of its Section 301(h) waiver application, the City assumes a mass emission removal rate of "at least 80 percent." Removal of less than 80 percent would be a violation of the permit. The City has not challenged that requirement.

[4] The discharge resulting from an 80 percent removal rate would be about 6 percent higher. If the Plant operated at an 80 percent removal rate, the figure for 2006 based on the City's projected discharge would be slightly less than 12,000 tons.

[5] EPA indicated in its February 11, 2002 response to comments that "the proposed discharge would meet the nine 301(h) requirements and is in full compliance with the CWA [Clean Water Act]." EPA also stated that the discharge of mass emissions at the proposed 15,000 metric ton level was "entirely consistent with the language and purpose of the OPRA [Ocean Pollution Reduction Act of 1994]."

would occur with a discharge of 15,000 tons per year that would not occur if the discharge were limited to 13,995 tons.

California law requires that an administrative agency "build a bridge" between the decisions it makes and the record that supports the decision. *Topanga Association for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506. It is difficult to find such a bridge in this case. The absence of a real-world controversy makes the entire issue seem academic at best. As we pointed out in our discussion above, unless the City fails to comply with its obligation to remove 80 percent or more of the TSS from its effluent, neither the 15,000 ton limit nor the 13,995 ton limit is actually at issue. If it continues to remove TSS at the current 85 percent rate, the Plant will not even approach those limits until it is operating at near design capacity, many years from now. Any concern about the short-term performance of the City in this regard would seem not to be addressed by the reduction and any long-term concerns ought to be resolved by the requirement that the discharge be no greater than 13,599 metric tons per year beginning in 2006. Clearly, the discharge from the Plant in 2006 is more relevant to its performance ten or fifteen years from now than its discharge in 2001.

The Regional Board discussed the reduction at its April 10 meeting. No clear reason was given for reducing the limit from 15,000 to 14,000 metric tons, although most of the Board members indicated on the record that they believed the 15,000 ton figure was not based on any legitimate environmental standards and that the reduction was an important statement of policy for the Regional Board to make. When asked by the Regional Board's counsel to articulate the findings in support of the reduction, the Chair responded:

> "I think the record supports a ratcheting down of the limit, and that this is our effort to ensure that the public health, welfare, and safety is protected beyond that which is proposed by the permit. I also offer the observation that the 15,000 limit was simply selected based on the old permit so that we are entitled to adopt a permit that is more protective of the public health than is proposed."

At no time does either the Chair or any other member of the Board point to evidence in the record that leaving the mass emission limit at 15,000 tons will cause a water quality or public health consequence that reducing it to 13,995 tons will avoid[6]

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[6] There is little or no evidence in the record that the Regional Board considered reducing the mass emission limit for technology-based reasons, anti-degradation principles, the need to prevent nuisance conditions, or other statutory or regulatory bases.

In its response to the petition, the Regional Board submitted a justification for the decision that is slightly more specific:

> There are many facts in the administrative record considered by the Regional Board in reaching its decision. These include, but are not limited to, the disparity between Petitioner's actual TSS emission rates and those proposed in their application, the ability of the PLMWTP [the Plant] to achieve much lower mass emissions than those proposed, the need to encourage water reclamation, the uncertainly of long-term impacts of the discharge, the lack of deep ocean monitoring, and the lack of monitoring for many human pathogens including viruses. [Response, page 9.]

Most of those issues have already been discussed above. The issues involving reclamation and the lack of monitoring are certainly very legitimate concerns. However, the question must be repeated with regard to those issues: how does a reduction from 15,000 tons to 14,000 tons in the order, when the actual discharge cannot exceed 12,000 tons during the life of the permit, improve reclamation prospects or lessen the need for more monitoring?

III. CONCLUSION

For the reasons stated above, the State Board concludes that the Regional Board failed to make findings, either in its order or during its deliberations, that justify reducing the mass emission limits for TSS from 15,000 metric tons per year to 13,995 metric tons per year in the waste discharge requirements. The order should be amended.

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IV. ORDER

It is hereby ordered that waste discharge requirements No. R9-2002-0025 be amended as follows: in paragraph B.1.a.(1), Limits on Total Suspended Solids, the narrative is amended to read:

> "The discharge shall achieve a mass emission of TSS of no greater than ~~13,995~~ 15,000 mt/yr; this requirement shall be effective through December 31, 2005. Effective January 1, 2006, the discharger shall achieve a mass emission of TSS of no greater than 13,599 mt/yr." [The remainder of the paragraph is unchanged.]

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on August 15, 2002.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Clerk to the Board

California Regional Water Quality Control Board
San Diego Region

Winston H. Hickox
Secretary for Environmental Protection

Internet Address: http://www.swrcb.ca.gov/rwqcb9/
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Phone (858) 467-2952 ♦ FAX (858) 571-6972

Gray Davis
Governor

April 23, 2002

Mr. Scott Tulloch
Director
City of San Diego Metropolitan Wastewater Department
9192 Topaz Way
San Diego, CA 92123

Dear Mr. Tulloch:

ADOPTION OF ORDER NO. R9-2002-0025, NPDES PERMIT NO. CA0107409 FOR THE CITY OF SAN DIEGO, E. W. BLOM POINT LOMA METROPOLITAN WASTEWATER TREATMENT PLANT DISCHARGE TO THE PACIFIC OCEAN THROUGH THE POINT LOMA OCEAN OUTFALL

Enclosed are copies of the subject Order and NPDES Permit, Fact Sheet, and Monitoring and Reporting Program adopted by the California Regional Water Quality Control Board, San Diego Region (Regional Board) at their April 10, 2002 meeting. These documents incorporate the changes specified in the errata sheet adopted with the tentative Order and changes made by the Regional Board at the April 10, 2002 meeting. As specified in Section G.18.a of the Order, the requirements contained therein became effective upon the date of adoption by the Regional Board.

Copies of the enclosed documents can also be obtained from our website as follows:

http://www.swrcb.ca.gov/rwqcb9/Programs/Outfall_Permit/outfall_permit.html

If you have any questions, please call Mr. David Hanson at (858) 467-2724.

Respectfully,

JOHN H. ROBERTUS
Executive Officer

Enclosures

cc: See distribution list

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
AND
U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX

ORDER NO. R9-2002-0025
NPDES PERMIT NO. CA0107409
WASTE DISCHARGE REQUIREMENTS
AND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
FOR THE
CITY OF SAN DIEGO
E. W. BLOM POINT LOMA
METROPOLITAN WASTEWATER TREATMENT PLANT

DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE POINT LOMA OCEAN OUTFALL
SAN DIEGO COUNTY

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
AND
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DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE POINT LOMA OCEAN OUTFALL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board) and the U. S. Environmental Protection Agency, Region IX (hereinafter EPA), find that:

1. On April 26, 1995, the City of San Diego (hereinafter City or discharger) submitted an application for a 301(h)-modified National Pollutant Discharge Elimination System (NPDES) permit for discharge from the E. W. Blom Point Loma Metropolitan Wastewater Treatment Plant (PLMWTP), pursuant to sections 301(h) and (j)(5) of the Clean Water Act (CWA), 33 U.S.C. §§ 1311(h) and (j)(5). The PLMWTP is owned and operated by the City. On November 9, 1995, the Regional Board and EPA adopted Order No. 95-106, NPDES Permit No. CA0107409, for the PLMWTP discharge. Order No. 95-106, as amended, established waste discharge requirements and monitoring and reporting requirements for the discharge of up to 240 million gallons per day (MGD) (average dry weather flow) of treated wastewater to the Pacific Ocean via the Point Loma Ocean Outfall Extension (PLOO).

2. On April 10, 2001, the City submitted an application for renewal of waste discharge requirements implementing federal NPDES regulations for a discharge of an average annual daily flow of 240 MGD from the PLMWTP based on concurrent renewal by EPA of a waiver of requirements for secondary treatment under Section 301(h) of the CWA

(33 USC 1250, et seq. at 1311(h)). The 2001 application is based on an improved discharge, as defined under 40 CFR 125.58(g).

a. The City's "projected average annual" total suspended solids (TSS) mass emission rates (MER) listed in the application and used as the basis for the proposed MER limit of 15,000 metric tons per year (mt/yr) do not reflect actual emissions, currently less than 10,000 mt/yr. The City used an 80 percent removal rate in calculating projected emissions instead of actual removal rates which averaged greater than 86 percent in the year 2000,

b. The proposed TSS MER limit of 15,000 mt/yr has no technical basis other than being a carryover from the 1990 permit. The 1990 TSS MER limit was calculated using the average dry-weather flowrate capacity of the PLOO of 219 MGD and the instantaneous maximum limit of 50 milligrams per liter (mg/l) for TSS, which would allow the City's MER limit to be based on the highest daily maximum concentration limit for TSS rather than on more restrictive and representative long-term average concentration limits.

c. The City has demonstrated that it can achieve greater than 85 percent removal of TSS on a consistent basis. A technology-based MER limit using the PLMWTP rated average annual daily flow capacity of 240 MGD, the year 2000 annual average influent TSS concentration of 278 mg/l, and the assumption that the PLMWTP could remove 85 percent of the TSS at that flow rate would be 13,818 mt/yr, and

d. Using the City's projected end-of-permit flow of 195 MGD, the year 2000 annual average influent TSS concentration of 278 mg/l, and the assumption that the PLMWTP could remove 85 percent of the TSS at that flow rate, the actual emissions at the end of the permit term would be 11,228 mt/yr.

3. The EPA drafted a Tentative Decision Document (TDD) evaluating the discharge from the PLMWTP based on 1995-2000 effluent concentrations for TSS and BOD_5 and the City's projected average annual end-of-permit flow of 195 MGD, as provided in the 2001 application. The EPA Regional Administrator's (hereinafter Regional Administrator) tentative decision was issued on February 11, 2002, granting the City's 301(h) modification request for the following parameters: TSS and BOD_5.

4. The Metropolitan Sewerage System (Metro System) is owned and operated by the City. The Metro System presently serves all or portions of the City and 15 other cities and water/sanitation districts (participating agencies). In addition, there is a cross-border emergency connection between the Metro System and the City of Tijuana, Mexico, which is currently not utilized. The service area encompasses approximately 450 square miles.

The institutional arrangements between the City and the participating agencies are defined by a number of Regional Wastewater Disposal Agreements, Sewage Disposal Agreements, Sewage Transportation Agreements, and various amendments to these agreements. The 15 participating agencies are:

Cities	Water/Sanitation Districts
City of Chula Vista	Lakeside-Alpine Sanitation District
City of Coronado	Lemon Grove Sanitation District
City of Del Mar	East Otay Mesa Sewer Maintenance District
City of El Cajon	Otay Water District
City of Imperial Beach	Spring Valley Sanitation District
City of La Mesa	Padre Dam Municipal Water District
City of National City	Wintergardens Sewer Maintenance District
City of Poway	

5. There have been a number of upgrades to the Metro System since 1995. These include: (1) the addition of two new sedimentation basins at the PLMWTP; (2) construction and start-up of the Metro Biosolids Center (MBC); (3) construction of the North City Wastewater Reclamation Plant (NCWRP); and (4) construction and start-up of the South Bay Water Reclamation Plant (SBWRP). Together, these facilities comprise the Metro System.

6. The PLMWTP is located at 1902 Gatchell Road, on the western side and near the southern tip of Point Loma in the City of San Diego. The facility site is located on the Fort Rosecrans military reservation and adjoins the Cabrillo National Monument. PLMWTP began operation in 1963. Currently, preliminary treatment consists of screening at Pump Station No. 2 (course screens) and at the treatment plant (fine screens). The wastewater is then distributed to six aerated grit removal chambers. Ferric chloride is added prior to entering the grit chamber to enhance solids removal. Wastewater exiting the grit chamber is then treated with anionic polymers to aid coagulation of solids and distribution to 12 sedimentation tanks. Sludge generated by the advanced primary treatment process is digested anaerobically. The Fiesta Island sludge processing facility has been closed and digested sludge from PLMWTP is now pumped to the MBC for dewatering. The centrate from the dewatering process is returned to the sewer system upstream of Pump Station No. 2 and treated advanced primary effluent is discharged through the PLOO.

7. The City began operation of the 30 MGD North City Water Reclamation Plant (NCWRP) during the 1995 permit term. Wastewater treatment consists of preliminary screening, grit removal, primary treatment, secondary treatment with provision for nitrification and partial denitrification, tertiary filtration, and chlorination. Based on demand, a portion of treated water is released back into the sewer system and routed through Pump Station No. 2 to the PLMWTP. Waste solids are pumped to the MBC where they are thickened, digested in anaerobic digesters, and dewatered. Centrate from the NCWRP is released back into the sewer system upstream of Pump Station No. 2.

8. The South Bay Water Reclamation Plant (SBWRP) is a 15 MGD treatment facility which is expected to begin operation in May 2002. Solids removed from the treatment process are released back into the sewer system upstream of Pump Station No. 2 for treatment at the PLMWTP. Water for reclamation receives full tertiary treatment. Excess secondary treated effluent is discharged 3.5 miles offshore through the South Bay Ocean Outfall (SBOO), which is shared with the International Wastewater Treatment Plant (IWTP), a facility owned and operated by the International Boundary and Water Commission.

9. The IWTP is a 25 MGD treatment facility that was constructed to handle wastewater from Mexico. While not considered part of the Metro System, the plant treats Mexican sewage that could otherwise cross the border untreated.

10. The PLOO was extended in 1993, when 12,500 feet of 144 inch diameter concrete pipe were added to the existing pipe. The new diffuser legs are each 2,500 feet long. The extended PLOO now discharges PLMWTP effluent to the Pacific Ocean approximately 4.5 miles offshore at a depth of 310 feet (coordinates 32°39'55" North Latitude, 117°19'25" West Longitude). Outfall hydraulic capacity is 432 MGD (peak wet weather flow).

    In the 1995 application, the City used a modified version of the RSB model, in *Dilution Models for Effluent Discharges* (EPA/600/R-94/086, 1994), to estimate critical initial dilutions for determining effluent quality requirements. These modeling results were verified by the EPA, as outlined in the TDD. The critical initial dilution for determining compliance with *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan), Chapter II, Table B toxic materials limitations is 204:1 (i.e., minimum month average initial dilution). This is roughly twice the critical initial dilution calculated for the original PLOO which terminated in State waters (i.e., 113). As explained in the TDD, critical initial dilutions for determining compliance with federal marine water quality criteria for the protection of aquatic life and human health are 204:1 and 328:1, respectively.

11. The State Water Resources Control Board (hereinafter State Board) adopted a revised California Ocean Plan on November 16, 2000, which was approved by EPA on December

3, 2001. The Ocean Plan identifies the following beneficial uses of State ocean waters to be protected:

a. Industrial water supply
b. Navigation
c. Water contact recreation
d. Non-contact water recreation
e. Ocean commercial and sport fishing
f. Preservation and enhancement of Areas of Special Biological Significance (ASBS)
g. Preservation of rare and endangered species
h. Marine habitat
i. Mariculture
j. Fish migration
k. Fish spawning
l. Shellfish harvesting
m. Aesthetic enjoyment

In order to protect these beneficial uses, the Ocean Plan establishes water quality objectives (for bacterial, physical, chemical, and biological characteristics, and for radioactivity), general requirements for management of waste discharged to the ocean, quality requirements for waste discharges (effluent quality requirements), discharge prohibitions, and general provisions.

12. The *Water Quality Control Plan, San Diego Basin (9)* (Basin Plan) was adopted by the Regional Board on September 8, 1994 and approved by the State Board. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the State Board.

13. The Basin Plan identifies the following beneficial uses of State ocean waters to be protected:

a. Industrial service supply
b. Navigation
c. Water contact recreation
d. Noncontact water recreation
e. Commercial and sport fishing
f. Preservation of biological habitats of special significance
g. Rare, threatened, or endangered species
h. Marine habitat
i. Aquaculture
j. Migration of aquatic organisms

k. Spawning, reproduction, and/or early development
l. Shellfish harvesting
m. Wildlife habitat

The Basin Plan relies primarily on the requirements of the Ocean Plan for protection of these beneficial uses; however, the Basin Plan establishes additional water quality objectives for dissolved oxygen and pH.

14. Numeric effluent limitations for non-301(h) pollutant parameters discharged through the PLOO are established based on Ocean Plan quality requirements for waste discharges.

15. Order No. 95-106 contained mass emission benchmarks for effluent discharged through the PLOO. These benchmarks were established to address the uncertainty due to projected increases in toxic pollutant loadings from the PLMWTP to the marine environment during the five-year 301(h) modification, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with antidegradation requirements at the time of permit reissuance. Based on a review of effluent data collected during the previous permit term, the benchmarks contained in Order No. 95-106 are retained in Order No. R9-2002-0025, with minor revisions.

Mass emission benchmarks are not water quality-based effluent limitations and are not enforceable, as such. Annual mass emission benchmarks were determined using 1990 through April 1995 n-day average monthly performance (95th percentile) of the PLMWTP and the City's projected end-of-permit flow of 205 MGD (see 1995 application). Due to increases in source water concentrations in the City's imported potable water supply, mass emission benchmarks for copper and selenium were determined using 1994 n-day average monthly performance (95th percentile) of the PLMWTP and the City's projected end-of-permit flow of 205 MGD. The mass emission benchmark for cyanide has been corrected from the previous permit term. Average monthly performance was calculated as outlined in *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001, 1991; TSD), Appendix E.

16. The City has implemented a reclamation program with a system capacity of 45 MGD of reclaimed wastewater with the addition of the SBWRP. This meets the requirement for reclaimed water capacity of 45 MGD in § 301(j)(5) of the CWA. In addition, on a system-wide basis, the City will remove not less than 80 percent of TSS (on a monthly average) and not less than 58 percent of the BOD_5 (on an annual average) in the discharge to which this application applies. The City's permit application satisfies §§ 301(j)(5)(B)(i) and (j)(5)(C) of the CWA.

17. The City's renewal of a modification from secondary treatment requirements pursuant to Section 301(h) of the CWA is contingent upon:

a. Determination by the California Coastal Commission that the proposed discharge is consistent with the Coastal Zone Management Act [16 U.S.C. 1451 *et seq*.] (The California Coastal Commission will be hearing this issue at their meeting on March 5-8, 2002.); and

b. Determination by the U. S. Fish and Wildlife Service that the proposed discharge is consistent with the Endangered Species Act [16 U.S.C. 1531 *et seq*.] (The City sent a letter to the Service on June 8, 1999.).

18. Pursuant to 40 CFR 125.59(i)(2), the City has requested that the Regional Board provide a determination that the proposed discharge would comply with applicable State water quality standards. As specified in a Memorandum of Understanding (May 1984), the joint issuance of a NPDES permit which incorporates both the 301(h) modification and State waste discharge requirements will serve as the State's concurrence.

19. Pursuant to 40 CFR 125.60, the City's proposed percent removal requirements for TSS and BOD_5 are sufficient to demonstrate compliance with the federal requirement of at least 30 percent removal, and the State requirement of 75 percent removal for suspended solids. The discharge allows sufficient dilution to attain State water quality standards and federal water quality criteria.

20. Pursuant to 40 CFR 125.61, the City's proposed discharge will comply with Ocean Plan water quality standards for dissolved oxygen, suspended solids, and pH.

21. Pursuant to 40 CFR 125.62, the City's proposed discharge will not adversely impact public water supplies or interfere with the protection and propagation of a balanced, indigenous population of fish, shellfish, and wildlife and will allow for recreational activities.

22. Pursuant to 40 CFR 125.63, the City has proposed a monitoring program for the PLMWTP discharge. The Regional Board and EPA are including additional requirements for monitoring and reporting the impact of the 301(h)-modified discharge.

23. Pursuant to 40 CFR 125.64, the City's proposed discharge will not result in any additional treatment requirements on any other point or nonpoint source.

24. Pursuant to 40 CFR 125.65, the City has complied with urban area pretreatment requirements by demonstrating that it has an applicable pretreatment requirement in effect for each toxic pollutant introduced by an industrial user.

25. Pursuant to 40 CFR 125.66 and 125.68, the City's existing pretreatment program was approved by EPA on June 29, 1982.

26. Pursuant to 40 CFR 125.66, the City will continue implementing its existing nonindustrial source control program (which has been in effect since 1985). The City will also continue its existing comprehensive public education program to minimize the entrance of toxic pollutants from nonindustrial sources into the treatment works.

27. Pursuant to 40 CFR 125.67, there will be no new or substantially increased discharges from the point source of the pollutants to which the 301(h) modification will apply, above those specified in this order and permit.

28. The PLMWTP accepts additional flow and pollutants from low-flow urban runoff diversion systems and "first flush" industrial stormwater diversion systems that are routed to the sanitary sewer collection system.

29. On November 16, 1990, the EPA promulgated NPDES permit application requirements for storm water discharges (40 CFR 122, 123, and 124) which are applicable to the PLMWTP. On April 17, 1997, the State Board adopted Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities*. Storm water discharges from wastewater treatment facilities tributary to the PLOO are subject to the terms and conditions of Water Quality Order No. 97-03-DWQ, as amended.

30. Federal regulations (40 CFR 403) establish pretreatment program requirements for publicly owned treatment works (POTWs) which receive pollutants from industries subject to pretreatment standards. This order and permit contains industrial pretreatment program requirements pursuant to 40 CFR 403 (see Pretreatment Requirements).

31. On February 19, 1993, the EPA issued the final rule for the use and disposal of sewage sludge (40 CFR 503). This regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. The EPA, not the Regional Board, will oversee compliance with 40 CFR 503.

32. Effluent limitations, industrial pretreatment standards, sludge use and disposal regulations, and ocean discharge criteria established under Sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 405, and 503 of the CWA, as amended [33 U.S.C. 1251 *et seq*.], are applicable to the discharge.

33. On May 9, 1996, the Regional Board adopted Order No. 96-04, *General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies*, and

addenda thereto, to regulate sewage discharges from publicly owned sewage collection systems in the San Diego Region. Order No. 96-04, serving as State Waste Discharge Requirements, prohibits the discharge of sewage from sanitary sewer systems at any point upstream of a sewage treatment plant. Order No. 96-04 requires the development of a Sanitary Sewer Overflow Prevention Plan and a Sanitary Sewer Overflow Response Plan for each collection system in the Region. In the event that a sewage discharge occurs within a collection system, Order No. 96-04 specifies procedures for reporting the discharge to the Regional Board. (See Reporting Requirement H.5 for requirements that apply to sewage spills at wastewater treatment facilities.)

34. The Constitution of California states ". . . the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare." Based on this constitutional declaration and other considerations, the State Water Resources Control Board (SWRCB) has concluded that "in all cases where an applicant in a water-short area proposes a discharge of once-used wastewater to the ocean, the report of waste discharge should include an explanation as to why the effluent is not being reclaimed for further beneficial use." (SWRCB Order No. WQ 84-7) It has been and continues to be the policy of the Regional Board to encourage reclamation and reuse of water resources.

35. Waste discharge requirements for this discharge must be in conformance with 40 CFR 131.12 and State Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (known collectively as "antidegradation" policies). The PLMWTP discharge is in conformance with 40 CFR 131.12 because pollutant loadings to the environment are reduced during the period of the permit modification.

36. For the purposes of this order and permit, "waste" includes the City's total discharge, of whatever origin (i.e., gross, not net, discharge).

37. For the purposes of this discharge, the term "permittee" used in parts of 40 CFR incorporated into this order and permit by reference and/or applicable to this order and permit shall have the same meaning as the term "discharger" used elsewhere in this order and permit.

38. State Board Resolution No. 74-28, *Areas of Special Biological Significance*, requires the Regional Boards to select areas in coastal waters which contain "biological communities of such extraordinary, even though unquantifiable, value that no acceptable risk of change in their environments as a result of man's activities can be entertained." La Jolla

Ecological Reserve, approximately 12 miles north of the PLOO, is the closest designated Area of Special Biological Significance. As stated in the Basin Plan, discharges of wastewater and/or heat must be sufficiently removed spatially from an area of special biological significance to assure the maintenance of natural water quality in the area. Existing wastewater and/or heat discharges, which influence the natural water quality in the designated area, must be phased out as promptly as possible. Regional Board review of the monitoring data submitted in the City's application for a 301(h)-modified NPDES permit have not revealed any impacts on the La Jolla Ecological Reserve resulting from discharge through the PLOO. No impacts to the reserve area are expected to occur in the future.

39. The Regional Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    a. Beneficial uses to be protected and the water quality objectives reasonably required for that purpose;

    b. Other waste discharges;

    c. The need to prevent nuisance;

    d. Past, present, and probable future beneficial uses of water;

    e. Environmental characteristics of the receiving waters under consideration, including the quality of those receiving waters;

    f. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area;

    g. Economic considerations;

    h. The need for developing housing within the region; and

    i. The need to develop and use recycled water. (California Water Code 13263 and 13241)

40. The issuance of waste discharge requirements for this discharge is exempt from the requirement for preparation of environmental documents under the California Environmental Quality Act [Public Resources Code, Division 13, Chapter 3, Section 21000 *et seq*.] in accordance with Section 13389 of the California Water Code (CWC).

41. On February 11, 2002, the Regional Board and EPA notified the City and all known

interested parties of their intent to issue the 301(h)-modified NPDES permit for the discharge of treated effluent from the PLMWTP through the PLOO to the Pacific Ocean. (CWC 13378 and 13384)

42. The Regional Board and EPA at a public meeting on March 13, 2002 have heard and considered all comments pertaining to the discharge of treated effluent from the PLMWTP through the PLOO to the Pacific Ocean. (CWC 13378 and 13384)

43. This Order shall serve as a NPDES permit for the discharge of treated effluent from the PLMWTP through the PLOO to the Pacific Ocean pursuant to Section 402 of the CWA, and amendments thereto.

IT IS HEREBY ORDERED that the City of San Diego (hereinafter discharger), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and the regulations adopted thereunder, shall comply with the following for the handling, treatment, and disposal of wastes from the E. W. Blom Point Loma Metropolitan Wastewater Treatment Plant through the Point Loma Ocean Outfall:

A. PROHIBITIONS

1. The discharge of waste in a manner or to locations that have not been specifically authorized by this order and permit, or for which valid waste discharge requirements/NPDES permits are not in force, is prohibited.

2. Discharge through the PLOO from the PLMWTP in excess of an average daily flow rate of 240 MGD is prohibited, unless the Regional Board and the EPA Water Division Director (hereinafter Director) approve a revised flow rate in accordance with this order and permit.

3. The discharge of any pollutant that is not subject to an effluent limitation in this order and permit is prohibited, except in the following circumstances:

    a. The pollutant has been identified in the administrative record for this order and permit.

    b. The pollutant has not been identified in the administrative record for the order and permit, so long as the discharger: (1) has complied with all applicable requirements for disclosure of information about its pollutant discharges, operations, and sources of wastes; and (2) complies with all applicable requirements for notification of changes in its operations and discharges.

4. Compliance with Discharge Prohibitions, as stated in Chapter III.H of the 2001 Ocean Plan (Attachment 1) is required as a condition of this order and permit.

5. Compliance with Discharge Prohibitions contained in Chapter 4 of the 1994 Basin Plan (Attachment No. 2) is required as a condition of this order and permit.

B. DISCHARGE SPECIFICATIONS

1. The following effluent limitations apply to the undiluted effluent from PLMWTP discharged through the PLOO to the Pacific Ocean.

a. Effluent Limitations for Major Constituents and Properties of Wastewater

(1) 301(h) Pollutant Parameters

Effluent Constituent*	Mean Annual Percent Removal	Mean Monthly Percent Removal	Monthly Average
Biochemical Oxygen Demand (5-day) (BOD_5)	≥ 58 %**	n/a***	n/a
Total Suspended Solids (TSS)	n/a	≥ 80 %**	75 mg/l
	The discharger shall achieve a mass emission of TSS of no greater than 13,995 mt/yr; this requirement shall be effective through December 31, 2005. Effective January 1, 2006, the discharger shall achieve a mass emission of TSS of no greater than 13,599 mt/yr. These mass emission requirements shall only apply to TSS discharged from POTWs which are owned and operated by the discharger, and the discharger's wastewater generated in the Metro System service area. These mass emission requirements do not apply to wastewater (and the resulting TSS) generated in Mexico as a result of upset or shutdown and treated at and discharged from the PLMWTP.		

* The effluent concentration limitation for TSS was determined based on PLMWTP monthly average performance data for 1990 through 1994 provided by the discharger. Effluent mass emission limitations for TSS were determined using the discharger's 1995 and 2001 application; and the discharger's 1997 Metro System projected annual average effluent flow rate of 195 MGD and 80 percent removal of TSS.

** Percent removal to be calculated on a system-wide basis.

*** Not applicable.

Units: ≥ = greater than or equal to; % = percent; mg/l = milligrams per liter; mt/yr = metric tons per year

(2) Non-301(h) Pollutant Parameters

Effluent Constituent	Units	Monthly Average (30-day)*	Weekly Average (7-day)*	Maximum at any time*
Oil and Grease	mg/l lbs/day	25. 34,000	40. 68,000	75. 130,000
Settleable Solids	ml/l	1.0	1.5	3.0
Turbidity	NTU	75.	100.	225.
pH	pH units	Within limits of 6.0 - 9.0 at all times.		

* Effluent concentration limitations are the limiting concentrations specified in Table A of the 2001 Ocean Plan. Mass emission rates, where applicable, were determined using procedures outlined in the Ocean Plan and a flow rate of 205 MGD.

Units: mg/l = milligrams per liter; ml/l = milliliters per liter; lb/day = pounds per day; NTU = nephelometric turbidity units

b. Effluent Limitations for Toxic Materials for Protection of Marine Aquatic Life

Effluent Constituent	Units	6-Month Median*	Daily Maximum*	Instantaneous Maximum*
Arsenic	ug/l	1,000.	5,900.	16,000.
Cadmium	ug/l	200.	800.	2,100.
Chromium (Hexavalent)**	ug/l	400.	2,000.	4,100.
Copper	ug/l	200.	2,100.	5,700.
Lead	ug/l	400.	2,000.	4,100.
Mercury	ug/l	8.1	33.	80.
Nickel	ug/l	1,000.	4,100.	10,000.
Selenium	ug/l	3,100.	12,000.	30,800.
Silver	ug/l	100.	540.	1,000.
Zinc	ug/l	2,500.	15,000.	39,400

Effluent Constituent	Units	6-Month Median*	Daily Maximum*	Instantaneous Maximum*
Cyanide***	ug/l	200.	800.	2,100.
Total Chlorine Residual	ug/l	400.	2,000.	12,000.
Ammonia (as N)	ug/l	123,000.	492,000.	1,230,000.
Acute Toxicity	TUa	n/a****	6.5	n/a
Chronic Toxicity	TUc	n/a	205	n/a
Phenolic Compounds (non-chlorinated)	ug/l	6,200.	24,600.	61,500.
Chlorinated Phenolics	ug/l	200.	800.	2,100.
Endosulfan[1]	ug/l	2.	3.7	5.5
Endrin	ug/l	.4	.8	1.
HCH[2]	ug/l	.8	2.	2.5
Radioactivity	pci/l	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. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.		

* Effluent concentration limitations are based on the limiting concentrations specified in Table B of the 2001 Ocean Plan and were determined using procedures outlined in the Ocean Plan and a critical initial dilution of 204:1.

** Dischargers may at their option meet these limitations as total chromium limitations.

*** 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 136, as revised May 14, 1999.

**** Not applicable

Units: ug/l = micrograms per liter pci/l = picocuries per liter
TUc = toxic units chronic

c. Effluent Limitations for Toxic, Noncarcinogenic Materials for Protection of Human Health

Effluent Constituent	Units	Monthly Average (30-day)*
acrolein	ug/l	45,000.
antimony	ug/l	250,000.
bis(2-chloroethoxy) methane	ug/l	900.
bis(2-chloroisopropyl) ether	ug/l	250,000.
chlorobenzene	ug/l	120,000.
chromium (III)**	ug/l	39,000,000.
di-n-butyl phthalate	ug/l	720,000.
dichlorobenzenes[3]	ug/l	1,000,000.
diethyl phthalate	ug/l	6,800,000.
dimethyl phthalate	ug/l	170,000,000.
4,6-dinitro-2-methylphenol	ug/l	45,000.
2,4-dinitrophenol	ug/l	820.
ethylbenzene	ug/l	840,000.
fluoranthene	ug/l	3,100.
hexachlorocyclopentadiene	ug/l	12,000.
nitrobenzene	ug/l	1,000.
thallium	ug/l	400.
toluene	ug/l	17,000,000.
tributyltin	ug/l	.29
1,1,1-trichloroethane	ug/l	110,000,000.

Effluent Constituent	Units	Monthly Average (30-day)*
* Effluent concentration limitations are based on the limiting concentrations specified in Table B of 21the 2001 Ocean Plan and were determined using procedures outlined in the Ocean Plan and a critical initial dilution of 204:1. ** Dischargers may at their option meet these limitations as total chromium limitations. Units: ug/l = micrograms per liter		

d. Effluent Limitations for Toxic, Carcinogenic Materials for Protection of Human Health

Effluent Constituent	Units	Monthly Average (30-day)*
acrylonitrile	ug/l	21.
aldrin	ug/l	.0045
benzene	ug/l	1,200.
benzidine	ug/l	.014
beryllium	ug/l	6.8
bis(2-chloroethyl) ether	ug/l	9.2
bis(2-ethylhexyl) phthalate	ug/l	720.
carbon tetrachloride	ug/l	180.
chlordane[4]	ug/l	.0047
chlorodibromomethane	ug/l	1,800.
chloroform	ug/l	27,000.
DDT[5]	ug/l	.035
1,4-dichlorobenzene	ug/l	3,700.
3,3'-dichlorobenzidine	ug/l	1.7
1,2-dichloroethane	ug/l	5,700.
1,1-dichloroethylene	ug/l	200.
dichlorobromomethane	ug/l	1,300.

Effluent Constituent	**Units**	**Monthly Average (30-day)***
dichloromethane	ug/l	92,000.
1,3-dichloropropene	ug/l	1,800.
dieldrin	ug/l	.0082
2,4-dinitrotoluene	ug/l	530.
1,2-diphenylhydrazine	ug/l	33.
halomethanes[6]	ug/l	27,000.
heptachlor	ug/l	.01
heptachlor epoxide	ug/l	.004
hexachlorobenzene	ug/l	.043
hexachlorobutadiene	ug/l	2,900.
hexachloroethane	ug/l	510.
isophorone	ug/l	150,000.
N-nitrosodimethylamine	ug/l	1,500.
N-nitrosodi-N-propylamine	ug/l	78.
N-nitrosodiphenylamine	ug/l	510.
PAHs[7]	ug/l	1.8
PCBs[8]	ug/l	.0039
TCDD equivalents[9]	ug/l	.00000080
1,1,2,2-tetrachloroethane	ug/l	470.
tetrachloroethylene	ug/l	410.
toxaphene	ug/l	.43
trichloroethylene	ug/l	5,500.
1,1,2-trichloroethane	ug/l	1,900.
2,4,6-trichlorophenol	ug/l	59.

Effluent Constituent	Units	Monthly Average (30-day)*
vinyl chloride	ug/l	7,400.

* Effluent concentration limitations are based on the limiting concentrations specified in Table B of the 2001 Ocean Plan and were determined using procedures outlined in the Ocean Plan and a critical initial dilution of 204:1.
Units: ug/l = micrograms per liter

2. Any significant change in waste flow shall be cause for reevaluating effluent limitations.

3. Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.

4. Waste discharged from PLMWTP to the Pacific Ocean must be essentially free of:

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

   b. Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.

   c. Substances which will accumulate to toxic levels in marine waters, sediments, or biota.

   d. Substances that significantly decrease the natural light to benthic communities and other marine life.

   e. Materials that result in aesthetically undesirable discoloration of the ocean surface.

5. Waste discharged from the PLMWTP to the Pacific Ocean shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.

6. Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:

   a. Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports.

b. Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.

c. Maximum protection is provided to the marine environment.

7. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.

8. All waste treatment, containment, and disposal facilities shall be protected against 100-year peak stream flows as defined by the San Diego County flood control agency.

9. All waste treatment, containment, and disposal facilities shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year frequency 24-hour storm..

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

11. The discharge of substances for which effluent limitations are not established by this order and permit shall be prevented or, if the discharge cannot be prevented, minimized.

12. To address the uncertainty due to projected increases in toxic pollutant loadings from the PLMWTP to the marine environment during the five-year 301(h) modification, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with antidegradation requirements at the time of permit reissuance, the following mass emission benchmarks have been established for effluent discharged through the PLOO. The exceedance of a mass emission benchmark will trigger an antidegradation analysis for that pollutant to be conducted by the discharger, the results of which will accompany the discharger's re-application for a NPDES permit. These mass emission benchmarks are not water quality-based effluent limitations and are not enforceable, as such. These mass emission threshold values may be re-evaluated and modified during the permit term (see Special Provision I.4). To address the possibility that alternate effluent limitations may be proposed as a result of an antidegradation analysis performed in response to increases of solids loadings from the PLMWTP to the marine environment, in the event that such alternate effluent limitations are proposed, the discharger shall have the right to make any objection to the authority to propose, and to

the basis for, such limitations at the time such limitations are proposed.

The following effluent mass emission benchmarks for toxic and carcinogenic materials apply to the undiluted effluent from PLMWTP discharged through the PLOO:

Effluent Constituent	**Units**	**Annual Mass Emission**
arsenic	mt/yr	0.88
cadmium	mt/yr	1.4
chromium (hexavalent)*	mt/yr	14.2
copper	mt/yr	26.0
lead	mt/yr	14.2
mercury	mt/yr	0.19
nickel	mt/yr	11.3
selenium	mt/yr	0.44
silver	mt/yr	2.8
zinc	mt/yr	18.3
cyanide**	mt/yr	1.57
total chlorine residual***	mt/yr	—
ammonia (as N)	mt/yr	8018
phenolic compounds (non-chlorinated)	mt/yr	2.57
chlorinated phenolics	mt/yr	1.73
endosulfan[1]	mt/yr	0.006
endrin	mt/yr	0.008
HCH[2]	mt/yr	0.025
acrolein	mt/yr	17.6
antimony	mt/yr	56.6
bis(2-chloroethoxy) methane	mt/yr	1.50
bis(2-chloroisopropyl) ether	mt/yr	1.61

Effluent Constituent	Units	Annual Mass Emission
chlorobenzene	mt/yr	1.70
chromium (III)[*, ***]	mt/yr	—
di-n-butyl phthalate	mt/yr	1.33
dichlorobenzenes[3]	mt/yr	2.8
diethyl phthalate	mt/yr	6.23
dimethyl phthalate	mt/yr	1.59
4,6-dinitro-2-methylphenol	mt/yr	6.80
2,4-dinitrophenol	mt/yr	11.9
ethylbenzene	mt/yr	2.04
fluoranthene	mt/yr	0.62
hexachlorocyclopentadiene[***]	mt/yr	—
nitrobenzene	mt/yr	2.07
thallium	mt/yr	36.8
toluene	mt/yr	3.31
tributyltin	mt/yr	0.001
1,1,1-trichloroethane	mt/yr	2.51
acrylonitrile	mt/yr	5.95
aldrin	mt/yr	0.006
benzene	mt/yr	1.25
benzidine	mt/yr	12.5
beryllium	mt/yr	1.42
bis(2-chloroethyl) ether	mt/yr	1.61
bis(2-ethylhexyl) phthalate	mt/yr	2.89
carbon tetrachloride	mt/yr	0.79
chlordane[4]	mt/yr	0.014

Effluent Constituent	Units	Annual Mass Emission
chlorodibromomethane***	mt/yr	—
chloroform	mt/yr	2.19
DDT[5]	mt/yr	0.043
1,4-dichlorobenzene	mt/yr	1.25
3,3'-dichlorobenzidine	mt/yr	4.67
1,2-dichloroethane	mt/yr	0.79
1,1-dichloroethylene	mt/yr	0.79
dichlorobromomethane***	mt/yr	—
dichloromethane	mt/yr	13.7
1,3-dichloropropene	mt/yr	1.42
dieldrin	mt/yr	0.011
2,4-dinitrotoluene	mt/yr	1.61
1,2-diphenylhydrazine	mt/yr	1.52
halomethanes[6]	mt/yr	5.86
heptachlor	mt/yr	0.001
heptachlor epoxide	mt/yr	0.024
hexachlorobenzene	mt/yr	0.54
hexachlorobutadiene	mt/yr	0.54
hexachloroethane	mt/yr	1.13
isophorone	mt/yr	0.71
N-nitrosodimethylamine	mt/yr	0.76
N-nitrosodi-N-propylamine***	mt/yr	—
N-nitrosodiphenylamine	mt/yr	1.47
PAHs[7]	mt/yr	15.45
PCBs[8]	mt/yr	0.275

Effluent Constituent	Units	Annual Mass Emission
TCDD equivalents[9, ***]	mt/yr	—
1,1,2,2-tetrachloroethane	mt/yr	1.95
tetrachloroethylene	mt/yr	4.00
toxaphene	mt/yr	0.068
trichloroethylene	mt/yr	1.56
1,1,2-trichloroethane	mt/yr	1.42
2,4,6-trichlorophenol	mt/yr	0.96
vinyl chloride	mt/yr	0.40

* Dischargers may at their option meet these limitations as total chromium limitations.

** 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 136, as revised May 14, 1999.

*** An effluent mass emission benchmark for this constituent/property could not be statistically determined by the Regional Board and EPA.

Units: mt/yr = metric tons per year

C. RECEIVING WATER LIMITATIONS

1. The discharge of waste from the PLMWTP through the PLOO shall not, by itself or jointly with any other discharge, cause violation of the following Ocean Plan water quality objectives. Compliance with the water quality objectives shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed.

   a. Bacterial Characteristics

      (1) Water-Contact Standards

      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 Regional Board, but including all kelp beds, the following bacterial objectives shall be maintained throughout the water column:

      (a) Samples of water from each sampling station shall have a density of total coliform organisms less than 1,000 per 100 ml (10 per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml).

      (b) The fecal coliform density based on a minimum of not less than five samples for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100 ml.

      The "Initial Dilution Zone" of wastewater outfalls shall be excluded from designation as "kelp beds" for purposes of bacterial standards. Adventitious assemblages of kelp plants on waste discharge structures (e.g., outfall pipes and diffusers) do not constitute kelp beds for purposes of bacterial standards. Kelp beds, for purposes of the bacteriological standards of this order and permit, are significant aggregations of marine algae of the genera *Macrocystis* and *Nereocystis*. Kelp beds include the total foliage canopy of *Macrocystis* and *Nereocystis* plants throughout the water column.

(2) Shellfish Harvesting Standards

At all areas where shellfish may be harvested for human consumption, as determined by the Regional Board, the following bacterial objectives shall be maintained throughout the water column:

(a) The median total coliform density shall not exceed 70 per 100 ml, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

b. Bacterial Assessment and Remedial Action Requirements

The requirements listed below shall be used to:

(1) Determine the occurrence and extent of any impairment of a beneficial use due to bacterial contamination;

(2) Generate information which can be used in the development of an enterococcus standard; and

(3) Provide the basis for remedial actions necessary to minimize or eliminate any impairment of a beneficial use.

Measurement of enterococcus density shall be conducted at all stations where measurement of total and fecal coliforms are required. In addition to the requirements of Receiving Water Limitation C.1.a of this order and permit, if a shore station consistently exceeds a coliform objective or exceeds a geometric mean enterococcus density of 24 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period, the Regional Board may require the discharger to conduct or participate in a survey to determine the source of the contamination. The geometric mean shall be a moving average based on no less than five samples per month, spaced evenly over the time interval. When a sanitary survey identifies a controllable source of indicator organisms associated with a discharge of sewage, the Regional Board may require the discharger and any other responsible parties identified by the Regional Board to take action to control the source.

The discharger shall conduct sanitary surveys when so directed by the Regional Board. The discharger shall control any controllable discharges identified in a sanitary survey.

c. Physical Characteristics

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

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

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

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

d. Chemical Characteristics

(1) The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.

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

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

(4) The concentration of substances, set forth in Receiving Water Limitation C.3 of this order and permit, in marine sediments shall not be increased to levels which would degrade indigenous biota.

(5) The concentration of organic materials in marine sediments shall not be increased to levels which would degrade marine life.

(6) Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

e. Biological Characteristics

(1) Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

(2) The natural taste, odor, and color of fish, shellfish, or other marine

resources used for human consumption shall not be altered.

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

f. Radioactivity

Discharge of radioactive waste shall not degrade marine life.

2. The discharge of waste from the PLMWTP shall not, by itself or jointly with any other discharge, cause violation of the following Basin Plan ocean water quality objectives:

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

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

3. Toxic Materials

The discharge from the PLMWTP through the PLOO shall not by itself or jointly with any other discharge, cause the following Ocean Plan water quality objectives to be exceeded in the receiving water upon completion of initial dilution, except that limitations indicated for radioactivity shall apply directly to the undiluted waste effluent.

a. Water Quality Objectives for Toxic Materials for Protection Of Marine Aquatic Life

Constituent	**Units**	**6-Month Median***	**Daily Maximum***	**Instantaneous Maximum***
Arsenic	ug/l	8.	32.	80.
Cadmium	ug/l	1.	4.	10.
Chromium (Hexavalent)**	ug/l	2.	8.	20.
Copper	ug/l	3.	12.	30.
Lead	ug/l	2.	8.	20.

Constituent	**Units**	**6-Month Median***	**Daily Maximum***	**Instantaneous Maximum***
Mercury	ug/l	0.04	0.16	0.4
Nickel	ug/l	5.	20.	50.
Selenium	ug/l	15.	60.	150.
Silver	ug/l	0.7	2.8	7.
Zinc	ug/l	20.	80.	200.
Cyanide***	ug/l	1.	4.	10.
Total Chlorine Residual	ug/l	2.	8.	60.
Ammonia (as N)	ug/l	600.	2,400.	6,000.
Acute Toxicity	TUa	n/a****	0.3	n/a
Chronic Toxicity	TUc	n/a	1.	n/a
Phenolic Compounds (non-chlorinated)	ug/l	30.	120.	300.
Chlorinated Phenolics	ug/l	1.	4.	10.
Endosulfan[1]	ug/l	0.009	0.018	0.027
Endrin	ug/l	0.002	0.004	0.006
HCH[2]	ug/l	0.004	0.008	0.012
Radioactivity	pci/l	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. Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.		

Constituent	Units	6-Month Median*	Daily Maximum*	Instantaneous Maximum*

* Water quality objectives are based on the limiting concentrations specified in Table B of the 2001 Ocean Plan.
** Dischargers may at their option meet these limitations as total chromium limitations.
*** 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 136, as revised May 14, 1999.
**** Not applicable.
Units: ug/l =micrograms per liter pci/l = picocuries per liter
TUc = toxic units chronic

b. Water Quality Objectives for Toxic, Noncarcinogenic Materials for Protection of Human Health

Constituent	Units	Monthly Average (30-day)*
acrolein	ug/l	220.
antimony	ug/l	1,200.
bis(2-chloroethoxy) methane	ug/l	4.4
bis(2-chloroisopropyl) ether	ug/l	1,200.
chlorobenzene	ug/l	570.
chromium (III)**	ug/l	190,000.
di-n-butyl phthalate	ug/l	3,500.
dichlorobenzenes[3]	ug/l	5,100.
diethyl phthalate	ug/l	33,000.
dimethyl phthalate	ug/l	820,000.
4,6-dinitro-2-methylphenol	ug/l	220.
2,4-dinitrophenol	ug/l	4.0
ethylbenzene	ug/l	4,100.
fluoranthene	ug/l	15.

Constituent	Units	Monthly Average (30-day)*
hexachlorocyclopentadiene	ug/l	58.
nitrobenzene	ug/l	4.9
thallium	ug/l	2.
toluene	ug/l	85,000.
tributyltin	ug/l	0.0014
1,1,1-trichloroethane	ug/l	540,000.

* Water quality objectives are based on the limiting concentrations specified in Table B of the 2001 Ocean Plan.
** Dischargers may at their option meet these limitations as total chromium limitations.
Units: ug/l = micrograms per liter

c. Water Quality Objectives for Toxic, Carcinogenic Materials for Protection of Human Health

Constituent	Units	Monthly Average (30-day)*
acrylonitrile	ug/l	0.10
aldrin	ug/l	0.000022
benzene	ug/l	5.9
benzidine	ug/l	0.000069
beryllium	ug/l	0.033
bis(2-chloroethyl) ether	ug/l	0.045
bis(2-ethylhexyl) phthalate	ug/l	3.5
carbon tetrachloride	ug/l	0.90
chlordane[4]	ug/l	0.000023
chlorodibromomethane	ug/l	8.6
chloroform	ug/l	130.
DDT[5]	ug/l	0.00017

Constituent	**Units**	**Monthly Average (30-day)***
1,4-dichlorobenzene	ug/l	18.
3,3'-dichlorobenzidine	ug/l	0.0081
1,2-dichloroethane	ug/l	28.
1,1-dichloroethylene	ug/l	0.9
dichlorobromomethane	ug/l	6.2
dichloromethane	ug/l	450.
1,3-dichloropropene	ug/l	8.9
dieldrin	ug/l	0.00004
2,4-dinitrotoluene	ug/l	2.6
1,2-diphenylhydrazine	ug/l	0.16
halomethanes[6]	ug/l	130.
heptachlor	ug/l	0.00005
heptachlor epoxide	ug/l	0.00002
hexachlorobenzene	ug/l	0.00021
hexachlorobutadiene	ug/l	14.
hexachloroethane	ug/l	2.5
isophorone	ug/l	730.
N-nitrosodimethylamine	ug/l	7.3
N-nitrosodi-N-propylamine	ug/l	0.38
N-nitrosodiphenylamine	ug/l	2.5
PAHs[7]	ug/l	0.0088
PCBs[8]	ug/l	0.000019
TCDD equivalents[9]	ug/l	0.0000000039
1,1,2,2-tetrachloroethane	ug/l	2.3

Constituent	**Units**	**Monthly Average (30-day)***
tetrachloroethylene	ug/l	2.0
toxaphene	ug/l	0.00021
trichloroethylene	ug/l	27.
1,1,2-trichloroethane	ug/l	9.4
2,4,6-trichlorophenol	ug/l	0.29
vinyl chloride	ug/l	36.

* Water quality objectives are based on the limiting concentrations specified in Table B of the 2001 Ocean Plan.
Units: ug/l = micrograms per liter

D. PRETREATMENT REQUIREMENTS

1. The discharger shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR 403, including any subsequent regulatory revisions. Where 40 CFR 403 or subsequent revision places mandatory actions upon the discharger as Control Authority but does not specify a timetable for completion of the actions, the discharger shall complete the required actions within six months from the issuance date of this order and permit or the effective date of the 40 CFR 403 revisions, whichever comes later. For violations of pretreatment requirements, the discharger shall be subject to enforcement actions, penalties, fines, and other remedies by the EPA or other appropriate parties, as provided in the CWA, and by the State under the Porter-Cologne Water Quality Control Act. The EPA and the State may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the CWA and the Porter-Cologne Water Quality Control Act.

2. The discharger shall enforce the requirements promulgated under Sections 307(b), 307(c), 307(d), and 402(b) of the CWA with timely, appropriate, and effective enforcement actions. The discharger shall cause all nondomestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

3. The discharger shall perform the pretreatment functions as required in 40 CFR 403 and Section 13263.3 of the CWC, including, but not limited to:

    a. Implement the necessary legal authorities as provided in 40 CFR 403.8(f)(1);

    b. Enforce the pretreatment requirements under 40 CFR 403.5 and 403.6;

    c. Implement the programmatic functions as provided in 40 CFR 403.8(f)(2); and

    d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3).

4. The discharger shall comply with the urban area pretreatment requirements under Section 301(h) of the CWA and the implementing requirements at 40 CFR 125. The discharger's actions to comply shall include the following:

    a. During each calendar year, maintaining a rate of significant noncompliance (SNC), as defined at 40 CFR 403.8(f)(2)(vii), for significant industrial users (SIUs) of no more than 15 percent of the total number of SIUs.

The 15 percent noncompliance criteria includes only SIUs that are in SNC and which have not received at least a second level formal enforcement action from the discharger, in accordance with the Enforcement Response Plan included in Appendix K-2 of the discharger's April 1995 301(h) modification application. The second level of enforcement is an Administrative Notice and Order.

b. Providing the annual analysis regarding local limits required under 40 CFR 125.65(c)(1)(iii). As a consequence of any new local limits, some SIUs may need time to come into compliance with those limits. In any such cases, the discharger shall issue a Compliance Findings of Violation and Order which is the first level of formal enforcement in its Enforcement Response Plan. The Order shall contain a schedule for achieving compliance with the new local limits. SIUs receiving such Orders will not be included in the 15 percent noncompliance criteria.

5. The discharger shall submit annually to the EPA, State Board, Regional Board, and San Diego County Department of Environmental Health, Hazardous Materials Management Division, a report describing its pretreatment activities over the previous calendar year. If the discharger is not in compliance with conditions or requirements of this order and permit, or any pretreatment compliance inspection or audit requirements, then the discharger shall also include the reasons for noncompliance and state how and when the discharger shall comply with such conditions and requirements. This annual report shall cover operations from January 1st through December 31st and is due on April 1st. The report shall contain, but not be limited to, the following information:

a. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the POTW's influent and effluent for those pollutants identified under Section 307(a) of the CWA which are known or suspected to be discharged by nondomestic users. This will consist of wastewater sampling and analysis in accordance with the minimum frequency of analysis stated in MRP No. R9-2002-0025. The discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis are covered in Part E of this order and permit. The discharger shall also provide any influent or effluent monitoring data for nonpriority pollutants which the discharger believes may be causing or contributing to interference or pass through. Sampling and analysis shall be performed with the techniques prescribed in 40 CFR 136 and amendments thereto;

b. A discussion of upset, interference, or pass through incidents, if any, at the treatment plant which the discharger knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the nondomestic user(s) responsible. The discussion shall also

include a review of the applicable local pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent interference or pass through, or noncompliance with sludge disposal requirements;

c. An updated list of the discharger's SIUs, including their names and addresses, and a list of deletions, additions, and SIU name changes keyed to the previously submitted list. The discharger shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations;

d. The discharger shall characterize the compliance status of each SIU by providing a list or table which includes the following information:

(1) Name of the SIU;

(2) Category, if subject to federal categorical standards;

(3) The type of wastewater treatment or control processes in place;

(4) The number of samples taken and inspections performed by the POTW during the year;

(5) The number of samples taken by the SIU during the year;

(6) For an SIU subject to discharge requirements for total toxic organics (TTO), whether all required certifications were provided;

(7) A list of violations during the year. Identify whether the violations were for categorical standards, local limits, or the general or specific prohibitions at 40 CFR 403.5;

(8) Whether the facility is in SNC, as defined at 40 CFR 403.8(f)(2)(vii) at any time during the year;

(9) A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action, final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance.

(10) The names of any SIUs required to submit a baseline monitoring report (BMR), including any SIUs currently discharging or scheduled to discharge to the POTW; and

(11) The names of any SIU required to prepare and/or implement a pollution prevention plan pursuant to CA SB 709 and SB 2165.

e. A brief description of any programs the discharger implements to reduce pollutants from nondomestic users that are not classified as SIUs;

f. A brief description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to, changes concerning the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal authority, enforcement policy, funding levels, or staffing levels;

g. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases;

h. A summary of activities to involve and inform the public of the program, including a copy of the newspaper notice, if any, required under 40 CFR 403.8(f)(2)(vii).

i. A description of changes in sludge disposal methods;

j. A description of the program to quantify, characterize, regulate, and treat flow from low-flow urban runoff diversion systems and "first-flush" industrial stormwater diversion systems that are routed to the sanitary sewer collection system; and

k. A discussion of any concerns not described elsewhere in the annual report.

6. The discharger shall submit a semi-annual compliance status report to the EPA and State. The report shall cover the period of January 1st through June 30th. This report shall be submitted by September 1st. SIU compliance status for July 1st through December 31st shall be included in the annual report. The semi-annual reports shall contain:

a. The name and address of all SIUs which violated any discharge or reporting requirements during the reporting period;

b. A description of the violations including whether any discharge violations were for categorical standards, local limits, or other requirements;

c. A description of the enforcement or other actions taken to remedy the noncompliance; and

d. The status of active enforcement and other actions taken in response to SIU noncompliance identified in previous reports.

e. The status of any IU required to prepare and/or implement pollution prevention plans under CA SB 709 and SB 2165 .

E. SLUDGE REQUIREMENTS

1. General Requirements

a. The discharger must ensure that all sludge generated at its wastewater treatment facilities is reused or disposed of in accordance with applicable portions of:

(1) 40 CFR 258: for sludge disposed of in municipal solid waste landfills;

(2) 40 CFR 503: for sludge reused by land application, incinerated, or disposed of in sludge-only surface disposal sites (dedicated land disposal sites or sludge-only landfills); and

(3) 40 CFR 257: for all sludge disposal practices not covered under 40 CFR 258 or 503.

The discharger must ensure that sludge produced at its wastewater treatment facilities is reused/disposed of in accordance with 40 CFR 257, 258, and 503, whether the discharger reuses or disposes of the sludge directly or transfers it to another party for further treatment, reuse, or disposal. The discharger must inform subsequent preparers, appliers, or disposers of the sludge of requirements which they must meet under 40 CFR 257, 258, and 503.

b. The discharger shall notify the Regional Board and EPA prior to any change in use or disposal practice, including new land application sites, surface disposal sites, landfills, or treatment facilities. This notification shall include the following information:

(1) For land application:

(a) The information required in 40 CFR 501.15(a)(2)(viii) and (ix);

(b) For any sludge which does not meet Table 3 metals limits, copies of the applier's notifications to the EPA pursuant to 40 CFR 503.12(e) and (j); and

(c) For sludge shipped to another state or to Indian Lands, the notification as required in 40 CFR 503.12(i).

(2) For transfer to a preparer (composter, alkaline treater, or other):

(a) Name of preparer, mailing address, location of facility, and amount of sludge to be transferred to the preparer's site; and

(b) Copy of preparer's notification to the EPA pursuant to 40 CFR 122.21.

(3) For transfer to a surface disposal site operator:

(a) Name, mailing address, and location of facility; and

(b) Copy of surface disposal site operator's notification to the EPA pursuant to 40 CFR 122.21.

(4) For transfer to a landfill or facility not regulated under 40 CFR 258 or 503:

(a) Name, mailing address, and location of facility;

(b) Amount of sludge to be transferred to facility; and

(c) Description of treatment/use/disposal practice.

c. All sludge generated by the discharger's wastewater treatment facilities should be used or disposed of within two years. Any site where sludge generated by the discharger is stored for more than two years will be classified by the EPA as a surface disposal site pursuant to 40 CFR 503, Subpart C. The discharger must ensure that the operator of any such surface disposal site submits the notification required in 40 CFR 122.21 to the EPA 180 days before the site becomes a surface disposal site, and that the site operator complies fully with the requirements in 40 CFR 503, Subpart C for surface disposal sites at the two-year start date. If the discharger wants to store sludge for more than two years, or allow a contractor to store sludge for more than two years, the discharger must submit the information in 40 CFR 503.20(b) to the EPA in writing 180 days prior to the date at which the site becomes a surface disposal site.

d. Inspection and Entry: The discharger shall allow the Regional Administrator or an authorized representative thereof, upon the presentation of credentials, to:

(1) Enter upon all premises where sludge from the discharger is treated, stored, reused, or disposed, by either the discharger or contractor to the discharger;

(2) Have access to and copy any records that must be kept under the conditions of this order and permit or 40 CFR 503, by either the discharger or contractor to the discharger; and

(3) Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in the treatment, storage, reuse, or disposal of the discharger's sludge, by either the discharger or by contractor to the discharger.

e. Duty to Mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

f. The discharger must implement management practices to minimize production of odors, dust, and vector attraction during sludge treatment, transfer, storage, and disposal or use.

g. The discharger must assure that haulers who ship non-Class A sludge off site for additional treatment, reuse, or disposal take all reasonable measures to ensure that no sludge is discharged from vehicles during transit.

h. Sludge containing more than 50 mg/kg PCB's must be disposed of in accordance with 40 CFR 761.

i. Proper Operation and Maintenance: The discharger shall at all times properly operate and maintain all facilities and systems of sludge treatment and control, including adequate laboratory controls and quality assurance procedures. The discharger shall ensure that any person who takes the discharger's sludge for further treatment shall also properly operate and maintain their facilities.

2. Monitoring

a. Sludge shall be monitored once per month for the constituents required under 40 CFR 503.

b. Sludge shall be tested twice per year for all pollutants listed under Section 307(a) of the CWA (priority pollutants) and Title 22 CCR.

c. The discharger shall develop a sampling plan for collection of representative samples for monitoring pollutants, pathogens (for land application or surface disposal), and vector attraction reduction (for land application or surface disposal). The plan should include the number and location of sampling points. If

pathogen reduction is determined by time and temperature, the plan must be designed to determine the representative temperature of the process.

d. Samples of sludge shall be collected according to the procedures for compositing samples outlined in *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (EPA Publication SW-846, Second Edition, as updated). Samples shall be split, and a portion of the sample preserved, in the event that the results show concentrations of waste constituents that exceed 10 times the STLC listed in Title 22 CCR.

e. Results of analyses shall be reported in mg/kg, wet weight (for Title 22 CCR compliance) and 100 percent dry weight (for 40 CFR 503 compliance). If the results indicate that the total concentration of any waste constituent is greater than 10 times the STLC value for the constituent listed in Title 22 CCR, then the discharger shall also perform a Waste Extraction Test on the sludge sample pursuant to Title 22 CCR requirements.

f. The discharger shall test for dioxins, dibenzofurans, and coplanar PCBs at the time of their next priority pollutant scan, using Method 1613, Revision B, for dioxins and dibenzofurans, and Method 1668 for coplanar PCBs. Toxicity equivalency should be determined using the EPA's toxic equivalency factors (TEFs) for dioxins and dibenzofurans published in 1989 and the World Health Organization's TEFs for coplanar PCBs published in 1998. Detection limits of $\leq$1 ppt (in TEFs) shall be used.

3. Notification of Noncompliance

The discharger shall notify the EPA of any noncompliance which may seriously endanger health or the environment as soon as possible, but no later than 24 hours from the time the discharger first became aware of the circumstances. A written report shall be submitted to:

CWA Compliance Office (WTR-7)
U. S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

within five days. For other instances of noncompliance, the discharger shall notify the EPA in writing within five working days of becoming aware of the noncompliance.

4. Reporting Requirements

The discharger shall submit an annual report to the EPA by April 1st of each year for the period covering the previous calendar year. The report shall include:

a. Amount of sludge generated that year at each of its plants, in dry metric tons, and amount leaving each plant;

b. Amount transferred to Miramar, or other treatment sites, amount in treatment and in storage at these sites, and amount leaving these sites;

c. Results of all monitoring required in Part E.2;

d. For sludge disposed of in municipal solid waste landfills:

(1) Name and location of each landfill; and

(2) Amount of sludge shipped to each landfill, amount placed in landfill, and amount used as landfill cover.

e. For sludge that was land-applied:

(1) Amount land applied (in dry metric tons);

(2) The information required in 40 CFR 503.17; and

(3) Copies of records and certification statements required of contract land appliers per 40 CFR 503.17.

f. For sludge that was transferred to another preparer for treatment prior to land application, surface disposal, or placement in a municipal solid waste landfill:

(1) Amount sent to each preparer (in dry metric tons);

(2) Amount treated;

(3) Amount transferred by preparer to final reuse/disposal site; and

(4) Reference to preparers' annual report (if preparer does not submit an annual report to the EPA, then the discharger must include the information in Parts E.4.e, f, g, and h in its report to the EPA).

g. For sludge that was disposed in a surface disposal site:

(1) The information required in 40 CFR 503.27;

(2) Names and locations of surface disposal sites, and amount of sludge shipped to each site; and

(3) Results of groundwater monitoring; or copy of certification by a groundwater scientist that the placement of sludge on the site will not contaminate an aquifer, and name/title/telephone number of the groundwater scientist that made the determination.

h. For sludge that was stored:

(1) Locations (street address and latitude and longitude) and ages of all stored sludge, and description of the level of treatment of the sludge prior to storage; and

(2) Name and mailing address of operators of storage sites.

i. For sludge that was disposed/reused by other methods:

(1) Description of method used;

(2) Location of disposal/reuse site; and

(3) Name and mailing address of site operator.

Reports shall be submitted to:

Regional Sludge Coordinator (WTR-7)
U. S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4340

F. COMPLIANCE DETERMINATION

1. The annual average effluent limitation shall be the moving arithmetic mean of daily concentrations over the specified 365-day period.

2. The six-month median shall apply as a moving median of daily values for any 180-day period in which daily values represent flow weighted average concentrations within a 24-hour period.

3. The 30-day average shall be the moving arithmetic mean of daily concentrations over the specified 30-day period.

4. The 7-day average shall be the moving arithmetic mean of daily concentrations over the specified 7-day period.

5. The daily maximum shall apply to flow weighted 24-hour composite samples.

6. The instantaneous maximum shall apply to grab sample determinations.

7. If only one sample is collected during the time period associated with the effluent limitation (e.g., 30-day average or six-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.

8. The mass emission rate (MER), in pounds per day, shall be obtained from the following calculation for any calendar day:

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

   in which Q and C are the flow rate in MGD and the constituent concentration in mg/l, respectively, and 8.34 is the conversion factor. If a composite sample is taken, then C is the concentration measured in the composite sample and Q is the average flow rate occurring during the period over which the samples are composited.

9. Minimum Levels

   For each numeric effluent limitation, the discharger shall select one or more Minimum Levels (and their associated analytical methods) from Appendix II of the 2001 Ocean Plan. The "reported" Minimum Level is the Minimum Level (and its associated analytical method) chosen by the discharger for reporting and compliance determination from Appendix II.

a. Selection of Minimum Levels from Appendix II

The discharger must select from all Minimum Levels from Appendix II that are below the effluent limitation. If the effluent limitation is lower than all the Minimum Levels in Appendix II, then the discharger must select the lowest Minimum Level.

10. Use of Minimum Levels

a. Minimum Levels in Appendix II represent the lowest quantifiable concentration in a sample based on the proper application of method-specific analytical procedures and the absence of matrix interferences. Minimum Levels also represent the lowest standard concentration in the calibration curve for a specific analytical technique after the application of appropriate method-specific factors.

Common analytical practices may require different treatment of the sample relative to the calibration standard. Some examples of these practices are given in Chapter III.C.5.a of the Ocean Plan.

b. Other factors may be applied to the Minimum Level depending on the specific sample preparation steps employed. For example, the treatment typically applied when there are matrix effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied during the computation of the reporting limit. Application of such factors will alter the reported Minimum Level.

c. The discharger shall instruct its laboratories to establish calibration standards so that the Minimum Level (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve. In accordance with the Ocean Plan, the discharger's laboratory may employ a calibration standard lower than the Minimum Level in Appendix II.

11. Sample Reporting Protocols

a. The discharger shall report with each sample result the reported Minimum Level (selected in accordance with Part F.9 of this order and permit) and the laboratory's current MDL.

b. The discharger shall also report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting

protocols:

(1) Sample results greater than or equal to the reported Minimum Level shall 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, shall be reported as "Detected, but Not Quantified", or DNQ. The discharger shall write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."); and

(3) Sample results less than the laboratory's MDL shall be reported a "Not Detected", or ND.

12. Compliance Determination

Sufficient sampling and analysis shall be conducted to determine compliance with the effluent limitation.

a. Compliance with Single-Constituent Effluent Limitations

Dischargers are out of compliance with the effluent limitation if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level.

b. Compliance with Effluent Limitations expressed as a Sum of Several Constituents

Dischargers are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or NDQ.

c. Multiple Sample Data Reduction

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported Minimum Level). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the

multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

13. Pollutant Minimization Program

a. Pollutant Minimization Program Goal

The goal of the Pollutant Minimization Program is to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures, in order to maintain the effluent concentration at or below the effluent limitation.

Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The completion and implementation of a Pollution Prevention Plan, required in accordance with Water Code Section 13263.3(d) will fulfill the Pollutant Minimization Program Requirements in this section.

b. Determining the need for a Pollutant Minimization Program

(1) The discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true: the calculated effluent limitation is less than the reported Minimum Level; the concentration of the pollutant is reported as DNQ; and there is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

(2) Alternatively, the discharger must develop and conduct a Pollutant Minimization Program if all of the following conditions are true: the calculated effluent limitation is less than the Method Detection Limit; the concentration of the pollutant is reported as ND; and there is evidence showing that the pollutant is present in the effluent above the calculated effluent limitation.

c. The Regional Board may include special provisions in the discharge requirements to require the gathering of evidence to determine whether the pollutant is present in the effluent at levels above the calculated effluent limitation: Examples of evidence may include:

(1) Heath advisories for fish consumption;

(2) Presence of whole effluent toxicity;

(3) Results of benthic or aquatic organisms tissue sampling;

(4) Sample results from analytical methods more sensitive than method referenced in the order and permit; and

(5) The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the MDL.

d. Elements of a Pollutant Minimization Program

The Regional Board may consider cost-effectiveness when establishing the requirements of a Pollutant Minimization Program. The program shall include actions and submittals acceptable to the Regional Board including, but not limited to, the following:

(1) An annual review and semi-annual monitoring of potential sources of the reportable pollutant, which may include fish tissue monitoring and other bio-uptake sampling;

(2) Quarterly monitoring for the reportable pollutant in the effluent to the wastewater treatment system;

(3) Submittal of a control strategy designated to proceed toward the goal of maintaining concentrations of the reportable pollutant in the effluent at or below the calculated effluent limitation;

(4) Implementation of appropriate cost-effective control measures for the pollutant, consistent with the control strategy; and

(5) An annual status report that shall be sent to the Regional Board, including: all Pollutant Minimization Program monitoring results for the previous year; a list of potential sources of the reportable pollutant; a summary of all action taken in accordance with the control strategy; and a description of actions to be taken in the following year.

14. The discharger shall conduct semi-annual acute whole effluent toxicity (WET) tests on 24-hour composite effluent samples. Samples shall be taken at the NPDES sampling location.

a. Test Species and Methods

The discharger shall conduct tests with the following vertebrate and invertebrate

species for the first three suites of tests. After this screening period, monitoring shall be conducted using the most sensitive species for the rest of the permit term.

(1) Vertebrate: Topsmelt, *Atherinops affinis*

(2) Invertebrate: Shrimp, *Mysidopsis bahia*

The presence of acute toxicity shall be estimated as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/600/4-90-027F, 1993).

b. Definition of Acute Toxicity

Acute toxicity measures the lethal effect (i.e., mortality) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Test results shall be reported in TUa, where TUa = 100/96-hr LC50. The LC50 is the percent waste giving 50% survival of test organisms. If specific identifiable substances in wastewater can be demonstrated by the discharger as being rapidly rendered harmless upon discharge to the marine environment, but not as a result of dilution, the LC50 may be determined after the test samples are adjusted to remove the influence of those substances. When a 96-hr LC50 cannot be measured because greater than 50% of test species survive in 100% waste, the toxicity shall be calculated as TUa = log (100 - s)/1.7, where s = percentage survival in 100% waste. If s > 99, TUa shall be reported as zero.

c Quality Assurance

Concurrent testing with reference toxicants shall be conducted.

If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the discharger must re-sample and re-test as soon as possible.

Control and dilution water should be receiving water or lab water, as appropriate. If the dilution water is different from the culture water, then culture water should be used in a second control.

15. The discharger shall conduct monthly chronic WET tests on 24-hour composite effluent samples. Samples shall be taken at the NPDES sampling location.

a. Test Species and Methods

The discharger shall conduct tests with the following vertebrate, invertebrate, and alga species for the first three suites of tests. After this screening period, monitoring shall be conducted using the most sensitive species.

(1) Vertebrate: Topsmelt, *Atherinops affinis* (survival and growth).

(2) Invertebrate: Red abalone, *Haliotis rufescens* (larval development test).

(3) Alga: Giant kelp, *Macrocystis pyrifera* (germination and germ-tube length test).

Every other year, the discharger shall re-screen, at different times from the prior year(s). The re-screening period may be limited to one month, if the results are the same as the previous three-month screening. If the results of the re-screening are different, the discharger shall conduct two additional months of screening, determine the most sensitive species, and continue to monitor with the most sensitive species.

The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95-136, 1995).

b. Definition of Chronic Toxicity

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Test results shall be reported in TUc, where TUc = 100/NOEC. The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test, that causes no observable adverse effect on the test organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are <u>not</u> statistically significantly different from the controls).

c. Quality Assurance

A series of five dilutions and a control will be tested. The series shall include the instream waste concentration (IWC), two dilutions above the IWC, and two dilutions below the IWC (e.g., 12.5, 25, 50, 75 and 100 percent effluent, where IWC = 50). The IWC for this discharge is 0.49 percent effluent.

Concurrent testing with reference toxicants shall be conducted.

If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, then the discharger must re-sample and re-test as soon as possible.

Control and dilution water should be receiving water or lab water, as appropriate. If the dilution water is different from the culture water, then culture water should be used in a second control.

16. Preparation of Toxicity Reduction Evaluation (TRE) Workplan

The discharger shall submit to the Regional Board and EPA a TRE workplan within 180 days of the effective date of this order and permit. The workplan shall describe steps the discharger intends to follow if the effluent limitation for chronic toxicity, as specified in Discharge Specification B.1.b of this order and permit, is exceeded.

17. Toxicity Reduction Evaluation/Toxicity Identification Evaluation

a. If the toxicity effluent limitation is exceeded, then within 15 days of exceedance, the discharger shall begin conducting six additional tests, bi-weekly, over a 12 week period. If the toxicity effluent limitation is exceeded in any of these six additional tests, then the discharger shall notify the Executive Officer and Director. If the Executive Officer and Director determine that the discharge consistently exceeds a toxicity effluent limitation, then the discharger shall initiate a TRE/TIE in accordance with the TRE workplan, *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA 833-B-99-002, 1999), and EPA TIE guidance documents (Phase I, EPA/600/6-91/005F, 1992; Phase I, EPA/600/R-96/054, 1996; Phase II, EPA/600/R-92/080, 1993; and Phase III, EPA/600/R-92/081, 1993).

b. If no toxicity is detected in any of these additional six tests, then the discharger may return to the testing frequency specified in MRP No. R9-2002-0025.

18. WET Reporting

a. TRE/TIE results: Within 15 days of the exceedance of the toxicity effluent limitation, or the initiation of a TRE/TIE, the discharger shall notify the Regional Board and EPA in writing of:

(1) The finding of the TRE/TIE, or other investigation to identify the causes of toxicity;

(2) Actions the discharger has taken or will take to mitigate the impact of the discharge, to correct the noncompliance, and to prevent the recurrence of toxicity;

(3) Where corrective actions, including a TRE/TIE have not been completed, an expeditious schedule under which corrective actions will be implemented; and

(4) If no action has been taken, then the reason for not taking action.

b. By the end of the month the discharger shall submit, with the discharge monitoring report (DMR) for that month, a full report consisting of:

(1) Toxicity test results (in TUs) for all tests conducted during the monthly reporting period;

(2) Dates of sample collection and initiation of each toxicity test;

(3) The average flow rate occurring during the period over which the samples are composited; and

(4) Results of effluent analyses for chemical/physical parameters required under MRP No. R9-2002-0025.

c. Toxicity test results shall be reported according to the chronic manual chapter on Report Preparation, and shall be attached to the DMR. It is suggested that the discharger submit the data on an electronic disk in the Toxicity Standardized Electronic Reporting Form (TSERF) (*Standardized Electronic Reporting Format for Monitoring Effluent Toxicity: October 1994 Format*, State Board, 1995).

19. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000. The detection methods used for each analysis shall be reported with the results of the analysis. Detection methods used for coliforms (total and fecal) shall be those presented in Table 1A of 40 CFR 136, unless alternate methods have been approved in advance by the EPA pursuant to 40 CFR 136. 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 determined by the Regional Board to be appropriate.

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

G. STANDARD PROVISIONS

1. The following sections of 40 CFR are incorporated into this permit by reference:

   a. 122.5 *Effect of a permit*.

   b. 122.21 *Application for a permit*.

   c. 122.22 *Signatories to permit applications and reports*.

   d. 122.41 *Conditions applicable to all permits*.

   e. 122.61 *Transfer of permits*.

   f. 122.62 *Modification or revocation of permits*.

   g. 122.63 *Minor modifications of permits*.

   h. 122.64 *Termination of permits*.

2. *Review and revision of permit:* Upon application by any affected person, or on its own motion, the Regional Board may review and revise this Order. [CWC 13263(e)]

3. *Termination or modification of permit:* This permit may be terminated or modified for cause, including, but not limited to, all of the following:

   a. Violation of any condition contained in this permit.

   b. Obtaining this permit by misrepresentation, or failure to disclose fully all relevant facts.

   c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge. [CWC 13381]

4. *Material change:* The discharger shall file a new Report of Waste Discharge not less than 180 days prior to any material change in the character, location, or volume of the waste discharge, including, but not limited to, the following:

   a. Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

b. Significant change in disposal method (e.g., change from land disposal to a direct discharge to water), or change in the method of treatment which would significantly alter the characteristics of the waste.

c. Significant change in the disposal area (e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area) potentially causing different water quality or nuisance problems.

d. Increase in flow beyond that specified in the waste discharge requirements.

e. Increase in area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. [CWC 13372, 13376, and 13264, 23 CCR 2210]

5. *Transfers:* When this permit is transferred to a new owner or operator, such requirements as may be necessary under the CWC may be incorporated into this permit. (Also see 40 CFR 122.41(l)(3) and 122.61.)

6. *Conditions not stayed:* The filing of a request by the discharger for modification, revocation and reissuance, or termination of this permit, or a notification of planned change in or anticipated noncompliance with this permit does not stay any condition of this permit.

7. *Interim limitations:* The discharger shall comply with any interim effluent limitations which are in effect as a result of modification of this permit or as a result of any Regional Board or EPA enforcement action.

8. *Monitoring and Reporting Program:* The discharger shall conduct monitoring and submit reports in accordance this permit. Monitoring results shall be reported at the intervals specified in this permit. [CWC 13267 and 13383, 23 CCR 2230, 40 CFR 122.43(a), 122.44(i), and 122.48]

9. *Availability:* A copy of this permit shall be posted at a prominent location at or near the treatment and disposal facilities and shall be available to operating personnel at all times.

10. *Duty to minimize or correct adverse impacts:* The discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the noncompliance.

11. *Immediate notification and posting:* Whenever a receiving water sample is found to contain levels of bacteria which exceed water-contact standards for bacterial characteristics specified in this permit, the discharger shall immediately notify the County of San Diego, Department of Environmental Health and post signs, at the direction of the Department of Environmental Health, prohibiting body contact with water in all areas affected by the contamination.

12. *Twenty-four hour reporting:* In accordance with 40 CFR 122.41(l)(6)(ii)(C), the discharger shall report violation of any maximum daily effluent limitation specified in this permit to the Regional Board and EPA within 24 hours. [40 CFR 122.44(g)]

    In addition, the discharger shall report the following to the Regional Board and EPA within 24 hours:

    a. Any violation of any effluent limitation for acute toxicity specified in this permit.

    b. Any violation of any prohibition of this permit.

    c. Any finding of levels of bacteria in a receiving water sample which exceed water-contact standards for bacterial characteristics specified in this permit. [CWC 13267 and 13383]

13. *Reports and notifications:* The discharger shall submit reports and provide notifications to the Regional Board and other agencies as specified in this permit. These other agencies include EPA, State Board, and County of San Diego, Department of Environmental Health. Reports shall be submitted and notifications shall be made to:

    a. POTW Compliance Unit
       California Regional Water Quality Control Board
       San Diego Region
       9174 Sky Park Court, Suite 100
       San Diego, CA 92123-4340
       Phone - (858) 467-2952
       Fax - (858) 571-6972

    b. Regional Administrator
       U. S. Environmental Protection Agency
       Region IX
       [DMR/NPDES to WTR-7 and Monitoring Reports to WTR-2]
       75 Hawthorne Street
       San Francisco, CA 94105-3901

c. Regulatory Unit
Division of Water Quality
State Water Resources Control Board
P. O. Box 944213
Sacramento, CA 94244-2130

d. Department of Environmental Health
County of San Diego
P. O. Box 85261
San Diego, CA 92138-5261
Phone - (858) 338-2222
Fax - (858) 338-2174

14. *Responsibilities, liabilities, legal action, penalties:* The Porter-Cologne Water Quality Control Act provides for civil and criminal penalties comparable to, and in some cases greater than, those provided for under the CWA. [CWC 13385 and 13387]

Nothing in this permit shall be construed to protect the discharger from its liabilities under federal, State, or local laws.

Except as provided for in 40 CFR 122.41(m) and (n), nothing in this permit shall be construed to relieve the discharger from civil or criminal penalties for noncompliance.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties to which the discharger is or may be subject to under Section 311 of the CWA.

Nothing in this permit shall be construed to preclude institution of any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the CWA.

15. *Noncompliance:* Any noncompliance with this permit constitutes violation of the CWC and is grounds for denial of an application for permit modification. [Also see 40 CFR 122.41(a).]

16. *Discharge is a privilege:* No discharge of waste into waters of the State, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the State are privileges, not rights. [CWC 13263(g)]

17. *Supersession:* This Order supersedes Order No. 95-106 when this Order becomes effective.

18. *Effective date:*

    a. These waste discharge requirements (Regional Board Order No. R9-2002-0025) shall become effective upon the date of adoption by the Regional Board.

    b. This NPDES permit shall become effective 33 days from the date of signature by the Director.

19. *Expiration:* This NPDES permit expires five years from its effective date. [40 CFR 122.43, 122.44(h), and 122.46]

20. *Continuation of expired permit:* After this permit expires, the terms and conditions of this permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES regulations on the continuation of expired permits are complied with. [40 CFR 122.6, 23 CCR 2235.4]

21. *Applications:* Any application submitted by the discharger for reissuance or modification of this permit shall satisfy all applicable requirements specified in federal regulations as well as any additional requirements for submittal of a Report of Waste Discharge specified in the CWC and the CCR.

22. *Confidentiality:* Except as provided for in 40 CFR 122.7, no information or documents submitted in accordance with or in application for this permit will be considered confidential, and all such information and documents shall be available for review by the public at the offices of the Regional Board and EPA.

23. *Severability:* The provisions of this permit are severable, and if any provision of this permit, or the application of any provisions of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

H. PROVISIONS APPLICABLE TO POTWs

1. 40 CFR 122.42(b) is incorporated into this permit by reference.

2. *Plant supervision and operation:* Supervisors and operators of all wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with 23 CCR 3680. [23 CCR 2233(d)(1)]

3. *Operation and maintenance manual:* Each wastewater treatment facility shall be operated and maintained in accordance with the operation and maintenance manual prepared by the owner of the treatment facility through the Clean Water Grant Program. [23 CCR 2233(d)(2)]

4. *New and expanded treatment facilities:* All proposed new treatment facilities and expansions of existing treatment facilities shall be completely constructed and operable prior to initiation of the discharge from the new or expanded facilities. The discharger shall submit a certification report for each new treatment facility, expansion of an existing treatment facility, and re-rating of an existing treatment facility. For new treatment facilities and expansions, the certification report shall be prepared by the design engineer. For re-ratings, the certification report shall be prepared by the engineer who evaluated the treatment facility capacity. The certification report shall:

    a. Identify the design capacity of the treatment facility;

    b. Certify the adequacy of each component of the treatment facility; and

    c. Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of how the process and physical design of the facility will ensure compliance with this permit.

    The signature and engineering license number of the engineer preparing the certification report shall be affixed to the report. The certification report, should, if possible, be submitted prior to beginning construction. The discharger shall not initiate a discharge from a new treatment facility or initiate a discharge from an existing treatment facility at a 30-day average dry weather flowrate in excess of its design capacity until:

    a. The certification report is received by the Executive Officer;

    b. The Executive Officer has received written notification of the completion of construction (new treatment facilities and expansions only);

    c. An inspection of the plant has been made by the Regional Board staff (new

treatment facilities and expansions only); and

d. The Executive Officer has provided the discharger with written authorization and a permit modification to discharge at a 30-day average dry weather flowrate not to exceed the revised design capacity.

5. *Sewer Overflow Reporting:* The discharger shall report sewer overflow events in accordance with the following procedures:

a. Definition

For purposes of this Reporting Requirement, a sewer overflow event is a discharge of treated or untreated wastewater at a location not authorized by waste discharge requirements and/or NPDES permit which results from a pump station failure, sewer line break, obstruction, surcharge, or any other operational dysfunction. This Reporting Requirement applies to all sewer overflow events other than those events subject to regulation under this Regional Board's Order No. 96-04, *General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies*.

b. 24-Hour Reporting to the Regional Board

If a sewer overflow event results in a discharge of 1,000 gallons or more, or results in a discharge to surface waters (any volume), the discharger shall:

Report the sewer overflow event to the Regional Board by any available means, including telephone, voice mail, or FAX, within 24 hours from the time that: (1) discharger has knowledge of the sewer overflow, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures. Notification may be made after normal business hours by leaving a message for the Regional Board on voice mail or FAX.

For the purpose of this Reporting Requirement, surface waters include navigable waters, rivers, streams (including ephemeral streams), lakes, playa lakes, natural ponds, bays, the Pacific Ocean, lagoons, estuaries, man-made canals, ditches, dry arroyos, mudflats, sandflats, wet meadows, wetlands, swamps, marshes, sloughs and water courses, and storm drains tributary to surface waters. The term includes waters of the United States as used in the CWA (see 40 CFR 122.2)

The information reported to the Regional Board in the initial report shall include the name and phone number of the person reporting the sanitary sewer overflow, the responsible sanitary sewer system agency, the estimated total sewer overflow

volume, the location, the receiving waters, whether or not the sewer overflow is still occurring at the time of the report, and confirmation that the local health services agency was or will be notified as required under the reporting requirements of the local health services agency.

c. Five-Day Reporting to the Regional Board

If the sewer overflow event results in a discharge of 1,000 gallons or more, or results in a discharge to surface waters (any volume), the discharger shall:

Complete a copy of the Sanitary Sewer Overflow Form attached to Monitoring and Reporting Program No. 96-04, and submit the completed Sanitary Sewer Overflow Report form, along with any additional correspondence, to the Regional Board no later than 5 days following the starting date of the sanitary sewer overflow. Additional correspondence and follow-up reports should be submitted to the Regional Board, as necessary, to supplement the Sanitary Sewer Overflow Report Form to provide detailed information on cause, response, adverse effects, corrective actions, preventative measures, or other information.

d. Quarterly Reporting to the Regional Board

The discharger shall report all sewer overflows, regardless of volume or final destination, in the next quarterly self-monitoring report, in accordance with the format described in Order No. 96-04.

6. *Sewer Overflow Prevention Plan:* The discharger shall maintain a Sewer Overflow Prevention Plan (SOPP) in an up-to-date condition and shall amend the SOPP whenever there is a change (e.g., in the design, construction, operation, or maintenance of the sewerage system or sewerage facilities) which materially affects the potential for sewer overflows. The discharger shall review and amend the SOPP as appropriate after each sewer overflow from the PLMWTP and downstream facilities. The SOPP and any amendments thereto, shall be subject to the approval of the Executive Officer and shall be modified as directed by the Executive Officer. The discharger shall submit the SOPP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The discharger shall ensure that the up-to-date SOPP is readily available to sewerage system personnel at all times and that sewerage system personnel are familiar with it.

7. *Sewer Overflow Response Plan:* The discharger shall maintain a Sewer Overflow Response Plan (SORP) for the PLMWTP and downstream facilities. The SORP shall establish procedures for responding to sewer overflows from the PLMWTP and downstream facilities so as to: (a) minimize the sewer overflow volume which enters surface waters, and (b) minimize the adverse effects of sewer overflows on water quality

and beneficial uses. The discharger shall maintain the SORP in an up-to-date condition and shall amend the SORP as necessary to accomplish these objectives. The discharger shall review and amend the SORP as appropriate after each sewer overflow from the PLOO and the area tributary to the PLOO. The SORP, and any amendments thereto, shall be subject to the approval of the Executive Officer and shall be modified as directed by the Executive Officer. The discharger shall submit the SORP and any amendments thereto to the Executive Officer upon request of the Executive Officer. The discharger shall ensure that the up-to-date SORP is readily available to sewerage system personnel at all times and that sewerage system personnel are familiar with it.

8. *Reclamation planning:* In November 2002 and November 2005, the discharger shall submit a report to the Executive Officer which describes the discharger's water reclamation plans and the potential for the discharger to reclaim additional wastewater in the next period of not less than five years. (This is not a requirement for the discharger to actually reclaim water or reuse reclaimed water.)

9. *Ensuring adequate capacity:* The discharger shall submit a written report to the Executive Officer within 90 days after the average dry weather influent flowrate for any 30-day period equals or exceeds 75 percent of the design capacity of any waste treatment and/or disposal facilities. The discharger's senior administrative officer shall sign a letter which transmits that report and certifies that the policy-making body is adequately informed about it. The report shall include:

   a. Average daily flow for the 30-day period, the date on which the instantaneous peak flow occurred, the rate of that peak flow, and the total flow for that day.

   b. The discharger's best estimate of when the average daily dry-weather flowrate will equal or exceed the design capacity of the facilities.

   c. The discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the waste treatment and/or disposal facilities and/or control the flowrate before the waste flowrate equals the capacity of present units.

10. *Sewage sludge:* The discharger shall comply with all federal and State laws, regulations, and requirements that apply to its sewage sludge use and disposal practice(s). [40 CFR 122.44(b)(2) and 122.44(o)]

I. SPECIAL PROVISIONS

1. The discharger shall continue to implement its existing nonindustrial source control program and public education program that have been in effect since 1985. These programs are described in Volume VI, Appendix K, of discharger's April 1995 application.

2. This permit may be modified in accordance with the requirements set forth at 40 CFR 122.62 and 124.5, to include appropriate conditions or limitations to address demonstrated effluent toxicity based on newly available information.

3. MRP No. R9-2002-0025 may be modified by the Regional Board and EPA to enable the discharger to participate in comprehensive regional monitoring activities conducted in the Southern California Bight during the term of this permit. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated sampling efforts, the discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. If predictable relationships among the biological, water quality and effluent monitoring variables can be demonstrated, it may be appropriate to decrease the discharger's sampling effort. Conversely, the monitoring program may be intensified if it appears that the objectives cannot be achieved through the discharger's existing monitoring program. These changes will improve the overall effectiveness of monitoring in the Southern California Bight. Minor changes may be made without further public notice.

4. To address the uncertainty due to projected increases in toxic pollutant loadings from the PLMWTP to the marine environment during the five-year waiver, and to establish a framework for evaluating the need for an antidegradation analysis to show compliance with antidegradation requirements at the time of permit reissuance, mass emission benchmarks have been established for effluent discharged through the PLOO. These mass emissions benchmarks were calculated based on EPA's evaluation of current effluent concentrations from the PLMWTP. This permit may be modified in accordance with the requirements set forth at 40 CFR 122.62 and 124.5 to revise mass emission benchmarks contained in Discharge Specification B.13. To address the possibility that alternate effluent limitations may be proposed as a result of an antidegradation analysis performed in response to increases of solids loadings from the PLMWTP to the marine environment, in the event that such alternate effluent limitations are proposed, the discharger shall have the right to make any objection to the authority to propose, and to

the basis for, such limitations at the time such limitations are proposed.

5. At least six months before a new treatment facility initiates discharges to the sewer system, the discharger shall submit to the Executive Officer and Director a methodology for monitoring and calculating percent removal of influent TSS and BOD_5, consistent with Discharge Specifications B.1.a(1) and B.2. The methodology shall be subject to the approval of the Executive Officer and Director.

J. ORDER NO. R9-2002-0025 ENDNOTES

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

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

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

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

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

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

7. 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.

8. 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.

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

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

2,3,7,8 hexa CDFs	0.1
2,3,7,8 hepta CDFs	0.01
octa CDF	0.001

ATTACHMENT NO. 1

2001 OCEAN PLAN
CHAPTER III.H
DISCHARGE PROHIBITIONS

A. Hazardous Substances

The level of any radiological, chemical, or biological warfare agent or high-level radioactive waste* into the ocean* is prohibited.

B. Areas Designated for Special Water Quality Protection

Waste* shall not be discharged to designated Areas* of Special Biological Significance except as provided in Chapter III.E, Implementation Provisions for Areas of Special Biological Significance, of the Ocean Plan.

C. Sludge

Pipeline discharge of sludge to the ocean* is prohibited by federal law; the discharge of municipal and industrial waste* sludge directly to the ocean*, or into a waste* stream that discharges to the ocean*, is prohibited by the Ocean Plan. The discharge of sludge digester supernatant directly to the ocean*, or to a waste* stream that discharges to the ocean* without further treatment, is prohibited.

It is the policy of the SWRCB that the treatment, use and disposal of sewage sludge shall be carried out in the manner found to have the least adverse impact on the total natural and human environment. Therefore, if federal law is amended to permit such discharge, which could affect California waters, the SWRCB may consider requests for exceptions to this section under Chapter III.H of the Ocean Plan, provided further that an Environmental Impact Report on the proposed project shows clearly that any available alternative disposal method will have a greater adverse environmental impact than the proposed project.

D. By-Passing

The by-passing of untreated wastes* containing concentrations of pollutants in excess of those in Table A or Table B of the Ocean Plan to the ocean* is prohibited.

Please refer to the 2001 California Ocean Plan for further information.

ATTACHMENT NO. 2

1994 WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO BASIN WASTE DISCHARGE PROHIBITIONS

California Water Code Section 13243 provides that a Regional Board, in a water quality control plan, may specify certain conditions or areas where the discharge of waste, or certain types of waste is not permitted. The following discharge prohibitions are applicable to any person, as defined by Section 13050(c) of the California Water Code, who is a citizen, domiciliary, or political agency or entity of California whose activities in California could affect the quality of waters of the State within the boundaries of the San Diego Region.

1. The discharge of waste to waters of the State in a manner causing, or threatening to cause a condition of pollution, contamination or nuisance as defined in California Water Code Section 13050, is prohibited.

2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code Section 13264 is prohibited.

3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code Section 13376) is prohibited.

4. Discharges of recycled water to lakes or reservoirs used for municipal water supply or to inland surface water tributaries thereto are prohibited, unless this Regional Board issues a NPDES permit authorizing such a discharge; the proposed discharge has been approved by the State Department of Health Services and the operating agency of the impacted reservoir; and the discharger has an approved fail-safe long-term disposal alternative.

5. The discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving water quality objectives, is prohibited. Allowances for dilution may be made at the discretion of the Regional Board. Consideration would include streamflow data, the degree of treatment provided and safety measures to ensure reliability of facility performance. As an example, discharge of secondary effluent would probably be permitted if streamflow provided 100:1 dilution capability.

6. The discharge of waste in a manner causing flow, ponding, or surfacing on lands not owned or under the control of the discharger is prohibited, unless the discharge is authorized by the Regional Board.

7. The dumping, deposition, or discharge of waste directly into waters of the State, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.

8. Any discharge to a storm water conveyance system that is not composed entirely of "*storm water*" is prohibited unless authorized by the Regional Board. [The federal regulations, 40 CFR 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to a storm water conveyance system that is not composed entirely of storm water except discharges pursuant to a NPDES permit and discharges resulting from fire fighting activities.] [Part 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

9. The unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system is prohibited.

10. The discharge of industrial wastes to conventional septic tank/subsurface disposal systems, except as authorized by the terms described in California Water Code Section 13264, is prohibited.

11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.

12. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.

13. The discharge of waste into a natural or excavated site below historic water levels is prohibited unless the discharge is authorized by the Regional Board.

14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the State or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

15. The discharge of treated or untreated sewage from vessels to Mission Bay, Oceanside Harbor, Dana Point Harbor, or other small boat harbors is prohibited.

16. The discharge of untreated sewage from vessels to San Diego Bay is prohibited.

17. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at mean lower low water (MLLW) is prohibited.

18 The discharge of treated sewage from vessels, which do not have a properly functioning U. S. Coast Guard certified Type I or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at MLLW is prohibited.

This certifies that the foregoing is a full, true, and correct copy of Order No. R9-2002-0025 adopted by the California Regional Water Quality Control Board, San Diego Region, on April 10, 2002 and of NPDES Permit No. CA0107409 issued by the U. S. Environmental Protection Agency, Region IX, on _____ , 2002.

JOHN H. ROBERTUS
Executive Officer
California Regional Water Quality Control Board
San Diego Region

ALEXIS STRAUSS
Director
Water Division
U. S. Environmental Protection Agency
Region IX

For the Regional Administrator

April 10, 2002

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
AND
U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX

MONITORING AND REPORTING PROGRAM NO. R9-2002-0025
NPDES PERMIT NO. CA0107409

FOR THE CITY OF SAN DIEGO
E. W. BLOM POINT LOMA METROPOLITAN WASTEWATER TREATMENT PLANT

DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE POINT LOMA OCEAN OUTFALL
SAN DIEGO COUNTY

Monitoring and Reporting Program (MRP) No. R9-2002-0025 supersedes and entirely replaces the monitoring and reporting requirements previously established by MRP No. 95-106. MRP No. R9-2002-0025 shall take effect upon the date of adoption by the California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board).

A. GENERAL MONITORING AND REPORTING PROVISIONS

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored waste stream. All samples shall be taken at the monitoring points specified in this MRP and, unless otherwise specified, before the waste stream joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall be subject to the approval of the Regional Board Executive Officer (hereinafter Executive Officer) and the U. S. Environmental Protection Agency, Region IX (hereinafter EPA), Water Division Director (hereinafter Director) and shall not be changed without notification to and the approval of the Executive Officer and the Director. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirements of Order No. R9-2002-0025.

2. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent

with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±5 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved under Title 40 of the Code of Federal Regulations Part 136 (40CFR 136), Guidelines Establishing Test Procedures for the Analysis of Pollutants, as amended, unless otherwise specified for sludge in 40CFR 503, or unless other test procedures have been specified in Order No. R9-2002-0025 and/or in this monitoring and reporting program.

4. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services in accordance with the provision of Section 13176 CWC or a laboratory approved by the Executive Officer.

5. Monitoring results must be reported on discharge monitoring report (DMR) forms approved by the Executive Officer.

6. If the discharger monitors any pollutant more frequently than required by this MRP, using test procedures approved under 40 CFR 136, or as specified in this MRP, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. The increased frequency of monitoring shall also be reported.

7. The discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this MRP, Order No. R9-2002-0025 and any enforcement order issued by the Regional Board, and records of all data used to complete the application for Order No. R9-2002-0025. Records shall be maintained for a minimum of five years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Executive Officer or Director. It is recommended that the discharger maintain the results of all analyses indefinitely.

8. Records of monitoring information shall include:

   a. The date, exact location, and time of sampling or measurements;

   b. The individual(s) who performed the sampling or measurements;

   c. The date(s) analyses were performed;

   d. The laboratory and individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of all such analyses.

9. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order No. R9-2002-0025 or in this MRP. The discharger shall report the analysis results, calculation results, data, and equations used in calculations.

10. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Officer a written statement signed by a registered professional engineer certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required by General Monitoring and Reporting Provision A.2.

11. The discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. An annual report shall be submitted by March 30 of each year which summarizes the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent of the samples or at least one sample per month, whichever is greater. The discharger must have a success rate equal to or greater than 80 percent. A similar frequency shall be maintained for analyzing spiked samples. When requested by EPA, the discharger will participate in the National Pollutant Discharge Elimination System (NPDES) discharger monitoring report quality assurance (QA) performance study.

12. The discharger shall report all instances of noncompliance not reported under 40 CFR 122.44 at the time monitoring reports are submitted. The reports shall contain the information listed in 40 CFR 122.44.

13. The monitoring reports shall be signed by an authorized person as required by 40 CFR 122.44.

14. A composite sample is generally defined as a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

The 100-milliliter minimum volume of an aliquot does not apply to automatic self-purging samplers.

15. A grab sample is an individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

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

17. Detection methods used for coliforms (total and fecal) shall be those presented in the most recent edition of Standard Methods for the Examination of Water and Wastewater or any improved method determined by the Regional Board (and approved by EPA) to be appropriate. Detection methods used for enterococcus shall be those presented in Test Methods for Escherichia coli and Enterococci in Water by Membrane Filter Procedure (EPA 600/4-85/076) or any improved method determined by the Executive Officer to be appropriate.

18. MRP No. R9-2002-0025 may be modified by the Regional Board and EPA to enable the discharger to participate in comprehensive regional monitoring activities conducted in the Southern California Bight during the term of this permit. The intent of regional monitoring activities is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During these coordinated sampling efforts, the discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. If predictable relationships among the biological, water quality and effluent monitoring variables can be demonstrated, it may be appropriate to decrease the discharger's sampling effort. Conversely, the monitoring program may be intensified if it appears that the objectives cannot be achieved through the discharger's existing monitoring program. These changes will improve the overall effectiveness of monitoring in the Southern California Bight. Minor changes may be made without further public notice.

19. By July 1 of each year, the discharger shall submit an annual report to the Regional Board and EPA which contains 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 with the requirements of Order No. R9-2002-0025 and this MRP. The report shall address operator certification and provide a list of current operating personnel and

their grade of certification. The report shall include the date of the facilities' Operations and Maintenance Manual, the date the manual was last reviewed, and a statement as to whether the manual is complete and valid for the current facilities. The report shall restate, for the record, the laboratories used by the discharger to monitor compliance with Order No. R9-2002-0025 and this MRP, and provide a summary of performance relative to the requirements in this MRP.

20. The discharger shall submit an annual report containing the following information:

    a. The number of equivalent unit connections to the sewerage system at the beginning of the year.

    b. The number of new equivalent unit connections added to the sewerage system during the year.

    c. The increase in influent flow volume resulting from the unit connections described in (b) above.

    d. The number of equivalent unit connections which have been authorized but not yet connected.

    e. The anticipated increase in influent flow volume resulting from connecting the units described in (d) above.

21. The sampling frequency of "daily" means that samples shall be collected seven days per week. "Weekly" samples shall be collected such that each day of the week is represented during a seven week period.

22. Monitoring results shall be reported at intervals and in a manner specified in this MRP and Order No. R9-2002-0025. Monitoring reports shall be submitted to the Regional Board and to EPA according to the following schedule:

REPORTS	**Report Period**	**Report Due**
MONTHLY REPORTS Influent and Effluent Solids Removal/Disposal Receiving Water Quality Report Tijuana Cross-Border Emergency Connection (when flowing)	Monthly	By the 1st day of 2nd following month (e.g., March 1 for January)

REPORTS	Report Period	Report Due
QUARTERLY REPORTS Sludge Analysis	 January-March April-June July-September October-December	 June 1 September 1 December 1 March 1
SEMI-ANNUAL REPORTS Pretreatment Report	 January-June	 September 1
ANNUAL REPORTS Pretreatment Report (Provision A.19) Sludge analysis QA Report Flow measurement Outfall inspection Receiving waters monitoring report Kelp report	 January-December	 April 1 April 1 April 1 July 1 July 1 July 1 October 1

23. All influent, effluent, and receiving water data shall be submitted annually to EPA for inclusion in the STORET database. The data shall be submitted in an electronic format specified by EPA.

B. INFLUENT AND EFFLUENT MONITORING

Influent monitoring is required to determine the effectiveness of pretreatment and nonindustrial source control programs, to assess the performance of treatment facilities, and to evaluate compliance with effluent limitations. As such, influent monitoring results must accurately characterize raw wastewater from the entire service area of the treatment facilities, unaffected by in-plant or return or recycle flows or the addition of treatment chemicals.

Effluent monitoring is required to determine compliance with the permit conditions and to identify operational problems and improve plant performance. Effluent monitoring also provides information on wastewater characteristics and flows for use in interpreting water quality and biological data. The effluent sampling station shall be located where representative samples of the effluent can be obtained. The sampling station shall be located downstream from any in-plant return flows and from the last connection through which wastes can be admitted to the outfall.

Influent and effluent monitoring shall be conducted as shown in the following table. In addition monitoring of the waste flow in the standby emergency connection from the City of Tijuana, Mexico, shall be conducted as shown in the following table, whenever there is flow from Mexico and/or the SBIWTP through the connection.

INFLUENT AND EFFLUENT SAMPLING AND ANALYSIS REQUIREMENTS

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	**Effluent stream**	**Emergency connection**
flowrate	MGD	recorder/totalizer	Continuous	Continuous	Continuous
BOD_5@20^{0}C	mg/l	24 hr. composite	Daily	Daily	Weekly
volatile suspended solids	mg/l	24 hr. composite	Daily	Daily	Weekly
total dissolved solids	mg/l	24 hr. composite	Daily	Daily	Weekly
temperature	^{0}C	grab	Daily	Daily	Weekly
floating particulates	mg/l	24 hr. composite	Daily	Daily	Weekly
TABLE A parameters					
grease & oil	mg/l	grab	Daily	Daily	Weekly
total suspended solids	mg/l	24 hr. composite	Daily	Daily	Weekly
settleable solids	ml/l	grab	Daily	Daily	Weekly
turbidity	NTU	grab	Daily	Daily	Weekly
pH	units	grab	Daily	Daily	Weekly
Table B parameters for protection of marine aquatic life					
arsenic	µg/l	24 hr. composite	Weekly	Weekly	Weekly
cadmium	µg/l	24 hr. composite	Weekly	Weekly	Weekly
chromium (VI)[1]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
copper	µg/l	24 hr. composite	Weekly	Weekly	Weekly
lead	µg/l	24 hr. composite	Weekly	Weekly	Weekly
mercury	µg/l	24 hr. composite	Weekly	Weekly	Weekly
nickel	µg/l	24 hr. composite	Weekly	Weekly	Weekly
selenium	µg/l	24 hr. composite	Weekly	Weekly	Weekly
silver	µg/l	24 hr. composite	Weekly	Weekly	Weekly
zinc	µg/l	24 hr. composite	Weekly	Weekly	Weekly
cyanide	µg/l	24 hr. composite	Weekly	Weekly	Weekly

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	Effluent stream	Emergency connection
ammonia (as N)	mg/l	24 hr. composite	Weekly	Weekly	Weekly
acute toxicity	TUa	24 hr. composite	-	Semi-annually	-
chronic toxicity	TUc	24 hr. composite	-	Monthly	-
phenolic compounds (nonchlorinated)	µg/l	24 hr. composite	Weekly	Weekly	Weekly
phenolic compounds (chlorinated)	µg/l	24 hr. composite	Weekly	Weekly	Weekly
endosulfan	µg/l	24 hr. composite	Weekly	Weekly	Weekly
endrin	µg/l	24 hr. composite	Weekly	Weekly	Weekly
HCH[2]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
radioactivity	pci/l	24 hr. composite	Monthly	Monthly	Monthly
Table B parameters for protection of human health - non carcinogens					
acrolein	µg/l	grab	Monthly	Monthly	Monthly
antimony	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-chloroethoxy) methane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-chloroisopropyl) ether	µg/l	24 hr. composite	Monthly	Monthly	Monthly
chlorobenzene	µg/l	grab	Monthly	Monthly	Monthly
chromium (III)[1]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
di-n-butyl phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dichlorobenzenes[3]	µg/l	24 hr composite	Monthly	Monthly	Monthly
diethyl phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dimethyl phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
4,6-dinitro-2-methylphenol	µg/l	24 hr. composite	Monthly	Monthly	Monthly
2,4-dinitrophenol	µg/l	24 hr. composite	Monthly	Monthly	Monthly
ethylbenzene	µg/l	grab	Monthly	Monthly	Monthly
fluoranthene	µg/l	24 hr. composite	Monthly	Monthly	Monthly

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	Effluent stream	Emergency connection
hexachlorocyclopentadiene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
nitrobenzene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
thallium	µg/l	24 hr. composite	Monthly	Monthly	Monthly
toluene	µg/l	grab	Monthly	Monthly	Monthly
tributyltin	µg/l	24 hr. composite	Monthly	Monthly	Monthly
1,1,1-trichloroethane	µg/l	grab	Monthly	Monthly	Monthly
Table B parameters for protection of human health - carcinogens					
acrylonitrile	µg/l	grab	Monthly	Monthly	Monthly
aldrin	µg/l	24 hr. composite	Weekly	Weekly	Weekly
benzene	µg/l	grab	Monthly	Monthly	Monthly
benzidine	µg/l	24 hr composite	Monthly	Monthly	Monthly
beryllium	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-chloroethyl) ether	µg/l	24 hr. composite	Monthly	Monthly	Monthly
bis(2-ethylhexyl) phthalate	µg/l	24 hr. composite	Monthly	Monthly	Monthly
carbon tetrachloride	µg/l	grab	Monthly	Monthly	Monthly
chlordane[5]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
chlorodibromomethane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
chloroform	µg/l	grab	Monthly	Monthly	Monthly
DDT[6]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
1,4-dichlorobenzene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
3,3'-dichlorobenzidine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
1,2-dichloroethane	µg/l	grab	Monthly	Monthly	Monthly
1,1-dichloroethylene	µg/l	grab	Monthly	Monthly	Monthly
dichlorobromomethane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dichloromethane	µg/l	grab	Monthly	Monthly	Monthly

CONSTITUENT	Unit	Sample type	Sampling frequency		
			Influent stream	Effluent stream	Emergency connection
1,3-dichloropropene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
dieldrin	µg/l	24 hr. composite	Weekly	Weekly	Weekly
2,4-dinitrotoluene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
1,2-diphenylhydrazine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
halomethanes[7]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
heptachlor	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hepthachlor epoxide	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachlorobenzene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachlorobutadiene	µg/l	24 hr. composite	Monthly	Monthly	Monthly
hexachloroethane	µg/l	24 hr. composite	Monthly	Monthly	Monthly
isophorone	µg/l	24 hr. composite	Monthly	Monthly	Monthly
N-nitrosodimethylamine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
N-nitroso-di-N-propylamine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
N-nitrosdiphenylamine	µg/l	24 hr. composite	Monthly	Monthly	Monthly
PAHs[8]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
PCBs[9]	µg/l	24 hr. composite	Weekly	Weekly	Weekly
1,1,2,2-tetrachloroethane	µg/l	grab	Monthly	Monthly	Monthly
TCDD equivalents[10]	µg/l	24 hr. composite	Monthly	Monthly	Monthly
tetrachloroethylene	µg/l	grab	Monthly	Monthly	Monthly
toxaphene	µg/l	24 hr. composite	Weekly	Weekly	Weekly
trichloroethylene	µg/l	grab	Monthly	Monthly	Monthly
1,1,2-trichloroethane	µg/l	grab	Monthly	Monthly	Monthly
2,4,6-trichlorophenol	µg/l	24 hr. composite	Monthly	Monthly	Monthly
vinyl chloride	µg/l	grab	Monthly	Monthly	Monthly
remaining "priority pollutants"	µg/l	24 hr. composite	Monthly	Monthly	Monthly

SAMPLING OF RETURN STREAMS

Parameter	Units	Sample type	Sampling frequency
flowrate	MGD	recorder/totalizer	continuous
total suspended solids	mg/l	24 hr. composite	daily
BOD_5@20^0C	mg/l	24 hr. composite	daily

The discharger shall report the Mass Emission Rate (MER) in lb/day or mt/yr for all constituents that have MER effluent limitations or MER benchmarks established by Discharge Specifications B.1 and/or B.11 of Order No. R9-2002-0025. The discharger shall also report the concentration and flowrate used to calculate the MER for each constituent.

The system-wide percent removals of TSS and BOD_5 shall be calculated using the following formula (mass emissions in metric tons):

$$\% \text{ Removal (TSS or } BOD_5) = \frac{(\text{System Influents} - \text{Return Streams}) - \text{Outfall Discharge}}{\text{System Influents} - \text{Return Streams}} \times 100$$

Where,

System Influents = PLMWTP Influent, NCWRP [make sure this term has previously been defined] Influent Pump Station, and NCWRP Influent from Penasquitos Pump Station.

Return Streams = NCWRP Filter Backwash, NCWRP Plant Drain, NCWRP Secondary and Un-disinfected Filtered Effluent Bypass, NCWRP Final Effluent, and MBC Centrate

The TSS and BOD_5 concentration, together with flow rate, of each stream shall be measured daily and a system-wide removal rate calculated according to the above formula. In the event that a flow rate measurement, TSS concentration, or BOD_5 concentration is not obtained from a stream, the median value for the previous calendar year for that stream shall be used as a surrogate number to allow completion of the calculation. The discharger shall be required to flag values where surrogate numbers are used in their self-monitoring reports submitted to the Regional Board. The failure to obtain a value may still be considered a violation of the permit that could result in enforcement action depending on the frequency of failures and efforts by the discharger to prevent such failures.

C. SLUDGE MONITORING REQUIREMENTS

General sludge monitoring and reporting requirements are contained in Sludge Requirements, Section I, of Order No. R9-2002-0025.

D. RECEIVING ENVIRONMENT MONITORING

Receiving environment monitoring shall be conducted as specified below. Station location, sample type, sample preservation, and analyses, when not specified, shall be by methods approved by the Executive Officer and Director.

Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of this MRP shall include, as a minimum, the following information:

- 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.).
- A description of sampling stations, including differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.).
- A description of the sample collection and preservation procedures used in the survey.
- A description of the specific method used for laboratory analysis.
- An in-depth discussion of the results of the survey. All tabulations and computations shall be explained.

1. Sampling Stations

a. <u>Offshore Water Quality Stations</u>. Offshore stations shall be located and numbered as follows:

Station	Depth (m)	N. Latitude	W. Longitude	Descriptor
A1	18	32° 39.56’	117° 15.72’	
A2	59	32° 39.37’	117° 16.68’	
A5	62	32° 41.32’	117° 17.27’	
A6	18	32° 41.56’	117° 16.18’	

Station	Depth (m)	N. Latitude	W. Longitude	Descriptor
A7	18	32° 40.53’	117° 16.01’	
A8	63	32° 39.84’	117° 16.84’	
A9	63	32° 40.83’	117° 17.12’	
A10	47	32° 39.50’	117° 16.13’	
A12	47	32° 40.47’	117° 16.42’	
A14	47	32° 41.43’	117° 16.63’	
A15	61	32° 40.10’	117° 16.90’	
A16	61	32° 40.58’	117° 17.05’	
B1	62	32° 35.00’	117° 16.18’	
B2	18	32° 46.00’	117° 16.18’	
B3	59	32° 45.42’	117° 18.38’	
B5	60	32° 49.25’	117° 19.60’	
B8	88	32° 45.50’	117° 20.77’	
B9	98	32° 45.33’	117° 21.70’	10.5 Km north of diffuser “Y”
B10	116	32° 45.22'	117° 22.16'	
B11	88	32° 46.57'	117° 21.35'	
B12	98	32° 46.36'	117° 22.30'	12.7 Km north of diffuser “Y”
B13	116	32° 46.38'	117° 22.64'	
C4	9	32° 39.95'	117° 14.98'	Approx. 660 m (2200 ft) west of the Point Loma Lighthouse and 1600 m south of the treatment plant outfall pipe
C5	9	32° 40.75'	117° 15.40'	Approx. 800 m (2600 ft) seaward of the Point Loma treatment plant immediately south of the outfall pipe
C6	9	32° 41.62'	117° 15.68'	Approx. 890 m (2900 ft) seaward and perpendicular to a point 1260 m north of the outfall pipe
C7	18	32° 42.98'	117° 16.33'	1.5 Km seaward of Station D7
C8	18	32° 43.96'	117° 16.40'	1.5 Km seaward of Station D8

Station	Depth (m)	N. Latitude	W. Longitude	Descriptor
E1	88	32° 37.53’	117° 18.35’	
E2	98	32° 37.45’	117° 19.09’	4.6 Km south of diffuser “Y”
E3	116	32° 37.29'	117° 20.09'	
E4	88	32° 38.50'	117° 18.57'	
E5	98	32° 38.38'	117° 19.28'	3.1 Km south of diffuser “Y”
E6	116	32° 38.28'	117° 20.00'	
E7	88	32° 39.00'	117° 18.65'	
E8	98	32° 38.91'	117° 19.34'	2.1 Km south of diffuser “Y”
E9	116	32° 38.75'	117° 20.06'	
E10	88	32° 39.50'	117° 18.81'	
E11	98	32° 39.40'	117° 19.42'	1.2 Km south of diffuser “Y”
E12	116	32° 39.37'	117° 19.96'	
E13	88	32° 40.01'	117° 18.89'	
E14	98	32° 39.94'	117° 19.49'	0.3 Km west of diffuser “Y”
E15	116	32° 39.88'	117° 19.91'	
E16	88	32° 40.52'	117° 19.07'	
E17	98	32° 40.48'	117° 19.54'	0.9 Km north of diffuser “Y”
E18	116	32° 40.38'	117° 19.88'	
E19	88	32° 41.04'	117° 19.18'	
E20	98	32° 40.96'	117° 19.67'	1.8 Km north of diffuser “Y”
E21	116	32° 40.89'	117° 20.00'	
E22	88	32° 41.58'	117° 19.25'	
E23	98	32° 41.47'	117° 19.77'	2.7 Km north of diffuser “Y”
E24	116	32° 41.40'	117° 20.06'	
E25	98	32° 42.38'	117° 20.07'	4.5 Km north of diffuser “Y”
E26	98	32° 43.82'	117° 20.57'	7.3 Km north of diffuser “Y”

b. Shore Stations. Shore stations shall be located and numbered as follows:

Station	N. Latitude	W. Longitude	Description
D1	32° 35.08’	117° 07.96’	Approx. 480 m (1600 ft) north of the pier at the end of Palm Ave in Imperial Beach
D2	32° 38.22’	117° 08.65’	Silver Strand State Beach, Area 4, just west of the Coronado Cays
D3	32° 40.58’	117° 10.74’	At the foot of Avenida del Sol seaward of the Hotel del Coronado
D4	32° 39.94’	117° 14.62’	Located at the southernmost tip of Point Loma just north of the lighthouse
D5	32° 40.85’	117° 14.94’	Directly in front of the Point Loma Wastewater Treatment plant where the outfall pipe enters the ocean
D6	32° 41.92’	117° 15.33’	Approx. 1260 m (4150 ft) north of the outfall pipe at NOSC seawater pump station
D7	32° 43.16’	117°15.44’	Sunset Cliffs at the foot of the stairs seaward of Ladera Street
D8	32° 44.22’	117°15.32’	Ocean Beach at the foot of the stairs seaward of Bermuda Street
D9	32° 44.80’	117°15.24’	Just south of the Ocean pier at the foot of the stairs seaward of Narragansett Street

c. Fish trawl and rig fish stations. Trawl stations shall be located and numbered as follows:

Station	Depth (m)	N. Latitude	W. Longitude
SD1	60	32° 46.40’	117° 18.60’
SD3	60	32° 41.76’	117° 17.30’
SD6	60	32° 39.47’	117° 16.85’
SD7	100	32° 35.06’	117° 18.39’
SD8	100	32° 37.54’	117° 19.37’
SD9	90	32° 39.24’	117° 18.84’
SD10	100	32° 39.16’	117° 19.50’
SD11	90	32° 40.73’	117° 19.96’
SD12	100	32° 40.65’	117° 19.81’

Station	Depth (m)	N. Latitude	W. Longitude
SD13	100	32° 42.83’	117° 20.25’
SD14	100	32° 44.30’	117° 20.96’
Rig fish stations shall be located in an area centered around the following sites			
RF1	107	32° 40.32’	117° 19.78’
RF2	96	32° 45.67’	117° 22.02’

2. Receiving Water Sampling and Analyses Requirements .

Receiving water monitoring shall be conducted as shown in the following table:

Parameter	Units	Stations	Sample Type	Sampling Frequency	Reporting Frequency
visual observations	---	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, D1-D9, E2, E4-E25	visual	monthly	monthly
temperature	°C	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, E2, E4-E25	profile	monthly	monthly
salinity	ppt	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, E2, E4-E25	profile	monthly	monthly
dissolved oxygen	mg/l	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, E2, E4-E25	profile	monthly	monthly
light transmittance	%	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, E2, E4-E25	profile	monthly	monthly
secchi disk	m	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, E2, E4-E25	visual	monthly	monthly
total suspended solids	mg/l	A1, A2, A5-A7, A10, A12, A14, B1, B3, B5, B9, B12, C4-C8, E2, E5, E8, E10, E12, E14, E16, E18	grab	monthly	monthly

Parameter	Units	Stations	Sample Type	Sampling Frequency	Reporting Frequency
pH	units	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B8-B13, C4-C8, E2, E4-E25	profile	monthly	monthly
total and fecal coliforms	CFU/ 100 ml	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B9, B12, C4-C8, D1-D9, E2, E5, E8, E10, E12, E14, E16, E18	grab	weekly-monthly	monthly
enterococcus	CFU/ 100 ml	A1, A2, A5-A7, A10, A12, A14, B1-B3, B5, B9, B12, C4-C8, D1-D9, E2, E5, E8, E10, E12, E14, E16, E18	grab	weekly-monthly	monthly
kelp	---	---	aerial photos	annually	annually

Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner to enable the observer to describe and to report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (e.g., cloudy, sunny, or rainy), current (e.g., direction), and tidal conditions (e.g., high or low tide) shall be recorded. Observations of water color, discoloration, oil and grease, turbidity, odor, materials of sewage origin in the water or on the beach shall be recorded. These observations shall be taken whenever a sample is collected (generally monthly). Observations at shoreline stations D1 through D9, shall occur on a more frequent basis (weekly or every two weeks) corresponding with the increased frequency of shoreline bacterial monitoring during certain times of the year (see below).

Total suspended solids shall be measured monthly at three depths (1 meter below the surface, mid-depth and bottom). Oil and grease shall be measured monthly in surface waters (top 1 meter). Temperature, salinity, dissolved oxygen, light transmittance and pH shall be measured monthly throughout the entire water column using probes (e.g., XBTs, CTDs) or meters (e.g., DO, pH). Suspended solids, secchi disc and light transmittance measurements shall be taken on the same day and as close together in time as possible.

Total coliforms, fecal coliforms and enterococcus shall be sampled at nine shore stations (D1-D9) according to the following schedule. Weekly from May 1 through October 31 and every two weeks from November 1 through April 30.

Total coliforms, fecal coliforms and enterococcus shall be sampled at eight kelp bed stations (A1, A6, A7, C4, C5, C6, C7, C8) at least five times per month, such that each day of the week is

represented over a two month period. Samples shall be collected from three depths (1 m below the surface, mid-depth and bottom).

Total coliforms, fecal coliforms and enterococcus shall be measured at least monthly at the remaining offshore stations at the following depth increments. Station B2, shall be sampled at three depths (1 m, 12 m and 18 m). Stations along the 45-meter contour (A10, A12, A14) shall be sampled at two depths (1 m and 40 m). Stations along the 60-meter contour (A2, A5, B1, B3, B5) shall be sampled at three depths (1 m, 40 m and 60 m) Stations along the 88-meter contour (E10 and E16) shall be sampled at five depths (1 m, 40 m, 60 m, 80 m and 88 m). Stations along the 98-meter contour (E2, E5, E8, E14, B9, B12) shall be sampled at five depths (1 m, 40 m, 60 m, 80 m and 98 m). Stations along the 116-m contour (E12, E18) shall be sampled at six depths (1 m, 40 m, 60 m, 80 m, 98 m , and 116 m).

3. Benthic Monitoring Requirements

a. <u>Sediment Sampling and Analyses Requirements</u>. Sediment samples shall be collected on a quarterly basis from twenty-three stations (B8-B13, E1-3, E5, E7-9, E11, E14, E15, E17, E19-21, E23, E25, E26) using a 0.1-m^2 modified Van Veen grab sampler. Sediment samples for chemical analyses shall be taken from the top 2 cm of the grab. These samples shall be analyzed for the set of constituents as listed below. For sediment chemistry ambient monitoring may be conducted using EPA approved or methods developed by NOAA's National Status and Trends Program for Marine Environmental Quality or methods developed in conjunction with the Southern California Bight Regional Monitoring Program. For chemical analysis of sediment, samples shall be reported on a dry weight basis.

Parameter	**Units**	**Sample type**	**Frequency**
Sediment grain size	µm	grab	quarterly
Total Organic Carbon	%	grab	quarterly
Total Nitrogen	%	grab	quarterly
Acid soluble sulfides	mg/kg	grab	quarterly
Metals			
Aluminum	mg/kg	grab	quarterly
Antimony	mg/kg	grab	quarterly
Arsenic	mg/kg	grab	quarterly
Cadmium	mg/kg	grab	quarterly
Chromium	mg/kg	grab	quarterly

Parameter	**Units**	**Sample type**	**Frequency**
Copper	mg/kg	grab	quarterly
Iron	mg/kg	grab	quarterly
Lead	mg/kg	grab	quarterly
Manganese	mg/kg	grab	quarterly
Mercury	mg/kg	grab	quarterly
Nickel	mg/kg	grab	quarterly
Selenium	mg/kg	grab	quarterly
Silver	mg/kg	grab	quarterly
Tin	mg/kg	grab	quarterly
Zinc	mg/kg	grab	quarterly
PCBs and Chlorinated Pesticides			
PCBs[11]	ng/kg	grab	quarterly
2,4'-DDD	ng/kg	grab	quarterly
4,4'-DDD	ng/kg	grab	quarterly
2,4'-DDE	ng/kg	grab	quarterly
4,4'-DDE	ng/kg	grab	quarterly
2,4'-DDT	ng/kg	grab	quarterly
4,4'-DDT	ng/kg	grab	quarterly
Aldrin	ng/kg	grab	quarterly
alpha-Chlordane	ng/kg	grab	quarterly
Dieldrin	ng/kg	grab	quarterly
Endosulfan	ng/kg	grab	quarterly
Endrin	ng/kg	grab	quarterly
gamma-BHC	ng/kg	grab	quarterly
Heptachlor	ng/kg	grab	quarterly
Heptachlor epoxide	ng/kg	grab	quarterly

Parameter	**Units**	**Sample type**	**Frequency**
Hexachlorobenzene	ng/kg	grab	quarterly
Mirex	ng/kg	grab	quarterly
Trans-nonachlor	ng/kg	grab	quarterly
Polycyclic Aromatic Hydrocarbons			
Acenapthene	µg/kg	grab	quarterly
Acenaphthylene	µg/kg	grab	quarterly
Anthracene	µg/kg	grab	quarterly
Benz(a)anthracene	µg/kg	grab	quarterly
Benzo(b)fluoranthene	µg/kg	grab	quarterly
Benzo(k)fluoranthene	µg/kg	grab	quarterly
Benzo(ghi)pyrelene	µg/kg	grab	quarterly
Benzo(a)pyrene	µg/kg	grab	quarterly
Benzo(e)pyrene	µg/kg	grab	quarterly
Biphenyl	µg/kg	grab	quarterly
Chrysene	µg/kg	grab	quarterly
Dibenz(ah)anthracene	µg/kg	grab	quarterly
Fluoranthene	µg/kg	grab	quarterly
Fluorene	µg/kg	grab	quarterly
Indeno(123cd)pyrene	µg/kg	grab	quarterly
Naphthalene	µg/kg	grab	quarterly
1-Methylnaphthalene	µg/kg	grab	quarterly
2-Methylnaphthalene	µg/kg	grab	quarterly
2,6-Dimethylnaphthalene	µg/kg	grab	quarterly
2,3,5-Trimethylnaphthalene	µg/kg	grab	quarterly
Perylene	µg/kg	grab	quarterly
Phenanthrene	µg/kg	grab	quarterly

Parameter	Units	Sample type	Frequency
1-Methylphenanthrene	µg/kg	grab	quarterly
Pyrene	µg/kg	grab	quarterly

b. <u>Infauna Monitoring</u>. For analyses of benthic infauna, two replicate samples of bottom sediments shall be collected and analyzed quarterly from the following 21 stations: B8-B13, E2, E5, E7-E9, E11, E14, E15, E17, E19-E21, E23, E25, and E26.

The benthic infaunal samples shall be collected using a 0.1-m^2 modified Van Veen grab. These sample grabs shall be separate from those collected for sediment analyses. The samples shall be sieved using a 1.0-mm mesh screen. The benthic organisms retained on the sieve shall be fixed in fifteen percent buffered formalin, and transferred to 70 percent ethanol within two to seven days for storage. All organisms, including infauna organisms, obtained during benthic monitoring shall be counted and identified to as low a taxon as possible. This enumeration and identification of organisms continues the historical data base developed by the discharger. This information shall be submitted quarterly. Biomass shall be estimated from wet weight measurements for each of the following taxa: molluscs, echinoderms, polychaetes, crustaceans and other taxa.

Community analyses shall consist of number of species, number of individuals per species and total numerical abundance, and biomass. Quarterly reports shall consist of the raw data (number of individuals per species) along with analysis of community parameters. Community parameters shall be summarized per station as:

Number of species per 0.1 m^2
Total number of species per station
Total numerical abundance
Biomass
Infaunal trophic index
Swartz' 75% dominance index
Shannon-Weiner's diversity index (H')
Pielou evenness (J')

Annual reports will include community parameters along with more detailed statistical comparisons including community, temporal, and spatial analyses. Methods may include, but are not limited to, various multivariate analyses such as cluster analysis, ordination, and regression. The discharger should also conduct additional analyses, as appropriate, to elucidate temporal and spatial trends in the data.

c. Fish Monitoring. Fish trawls shall be conducted to assess the community structure of demersal fish and macro-invertebrates and the presence of priority pollutants in fish. Single trawls for demersal fish and macro-invertebrates shall be conducted semiannually at three trawl stations (SD1, SD3, and SD6) and quarterly at each of eight trawl stations (SD7-SD14). Trawls shall be conducted using a Marinovich 7.62 m (25 ft) head rope otter trawl, using the guidance specified in the field manual developed for the Southern California Bight Pilot Project. Captured organisms shall be identified at all stations (SD1-SD14).

Fish collected by trawls should be identified to species. At all stations, community structure analysis should be conducted. Community structure analysis consists of the wet weight of each species, number of individuals per species, total numerical abundance, species richness, species diversity (i.e., Shannon-Wiener), multivariate pattern analyses (e.g., ordination and classification analyses). Abnormalities and disease symptoms shall be recorded and itemized (e.g., fin erosion, internal and external lesions, tumors).

Chemical analyses of fish tissue shall be performed semiannually on selected target species from SD7-SD14. The list of constituents shall be the same as for sediments with the exception that total lipids will be measured instead of organic carbon, nitrogen and sulfides. The species targeted for analysis will be selected for their ecological or commercial importance and abundance at each sampling location. Three replicate composite samples shall be prepared from each trawl station for both liver and muscle tissue. Each composite sample shall consist of tissues taken from at least three fish of the same species.

The species targeted for analysis at the trawl stations shall be primarily flatfish. The targeted species include but are not limited to the following: Pacific sanddab (Citharichthys sordidus), longfin sanddab (Citharichthys xanthostigma), speckled sanddab (Citharichthys stigmaeus), bigmouth sole (Hippoglossina stomata), or hornyhead turbot (Pleuronichthys verticalis). The California scorpionfish (Scorpaena guttata) and the halfbanded rockfish (Sebastes semicinctus) shall be targeted at sites that do not contain sufficient number of flatfish.

Rig fishing shall be performed semiannually to monitor the uptake of pollutants in fish which are consumed by man in order to determine the impact on public health, and to assess the impacts on local fish populations. Twice each year, fish shall be collected by hook and line or by setting baited lines from within the zone of initial dilution (ZID) and at some point removed from the ZID. The fish shall be representative of those caught by recreational and commercial fishermen in the area. Fish samples shall be identified as to species, number of individuals per species, standard length and wet weight. Physical abnormalities and disease symptoms shall be recorded and itemized (e.g., fin rot, internal and external lesions, and tumors).

Three replicate composite samples of the target species shall be obtained from each station. Each composite shall consist of a minimum of three individuals. Tissue shall be chemically analyzed for the same set of constituents as trawl-caught fish. The species targeted for analysis at the rig

fishing stations shall be primarily rockfish. The selected species will be representative of a typical sport fisherman's catch. These include but are not limited to: greenbotched rockfish (Sebastes rosenblatti); canary rockfish (Sebastes pinniger), squarespot rockfish (Sebastes hopkinsi), and additional species of the genus Sebastes.

4. Remote Sensing.

The discharger shall participate and coordinate with state and local agencies and other dischargers in the San Diego Region in the development and implementation of a remote sensing monitoring program for the trans border ocean region. This remote sensing monitoring program is intended to identify and track (in near real time) the fate and transport of the effluent from the Point Loma Ocean Outfall, the South Bay Ocean Outfall, wet weather discharge from the Tijuana River, and other sources of coastal sewage and stormwater plumes in the area. This program will focus on obtaining satellite and aircraft imagery in an area extending up to 100 Km North and 100 Km south of the US-Mexico Border and up to 15 Km offshore. The discharger shall provide both technical and financial assistance with the implementation of this program.

5. Kelp Bed Monitoring.

Kelp bed monitoring is intended to assess the extent to which the discharge of wastes may affect the areal extent and health of coastal kelp beds. The discharger shall participate with other ocean dischargers in the San Diego Region in an annual regional kelp bed photographic survey. Kelp beds shall be monitored annually by means of vertical aerial infrared photography to determine the maximum areal extent of the region's coastal kelp beds within the calender year. Surveys shall be conducted as close as possible to the time when kelp bed canopies cover the greatest area. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day. The images produced by the surveys shall be presented in the form of a 1:24,000 scale phot-mosaic of the entire San Diego Region coastline. Onshore reference points, locations of all ocean outfalls and diffusers, and the 30-foot (MLLW) and 60-foot (MLLW) depth contours shall be shown. The areal extent of the various kelp beds photographed in each survey shall be compared to that noted in surveys of previous years. Any significant losses which persist for more than one year shall be investigated by divers to determine the probable reason for the loss.

Table Footnotes

1. The discharger may, at its option, meet the effluent limitation and effluent mass emission benchmark for chromium (VI) or chromium (III) as a total chromium limitation and benchmark.

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

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

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

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

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

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

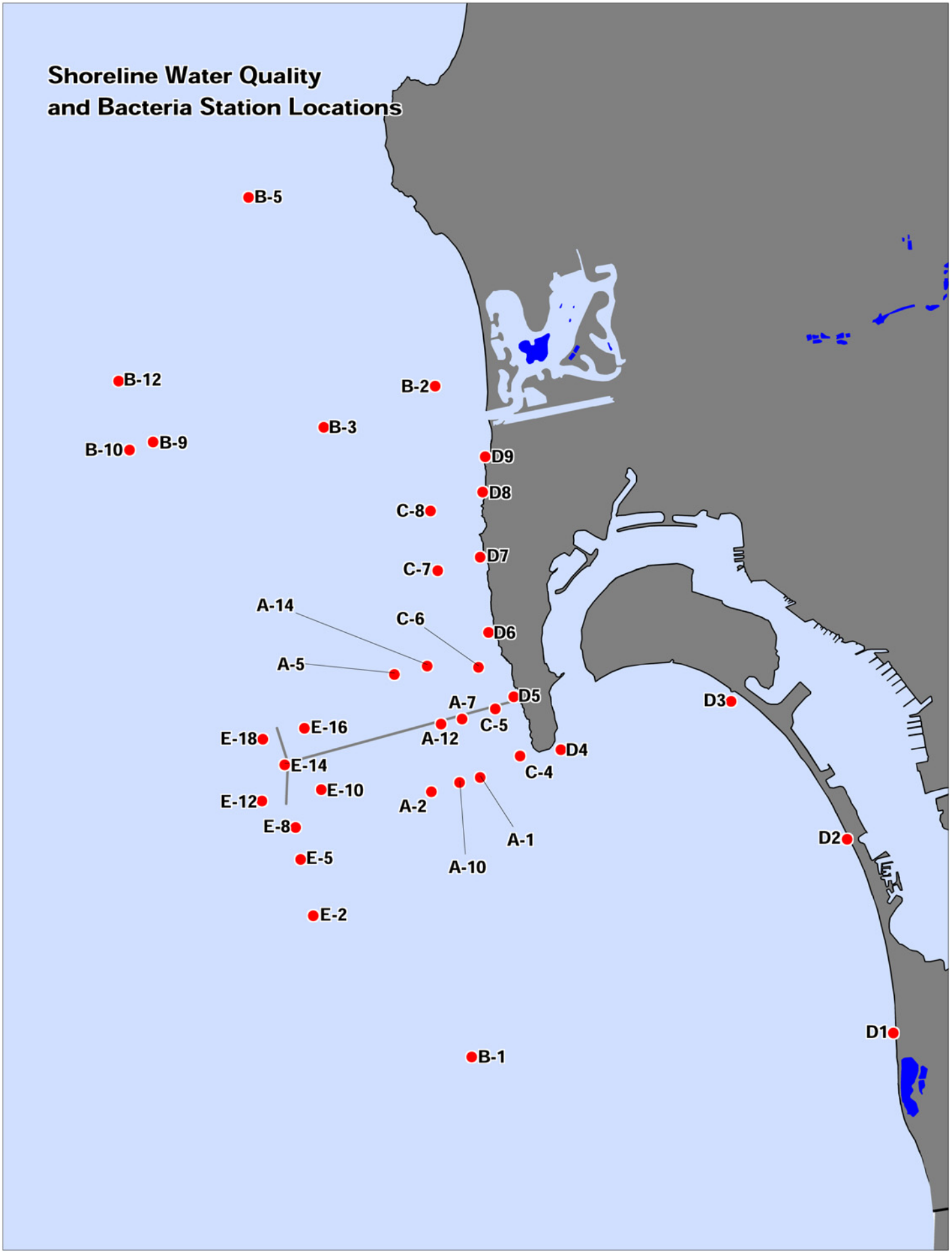
8. PAHs (polynuclear aromatic hydrocarbons) shall mean the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

9. 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.

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

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

11. For sediment and fish tissue PCBs shall mean the sum of the following congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, 206. These represent concensus based numbers developed by agencies participating in offshore regional monitoring programs in Southern California. These 41 congeners are thought to represent the most-important PCB congeners in terms of mass and toxicity.


Shoreline Water Quality
and Bacteria Station Locations
B-5
B-12
B-2
B-3
B-10
B-9
D9
D8
C-8
D7
C-7
A-14
C-6
D6
A-5
D5
A-7
D3
C-5
E-16
E-18
A-12
D4
E-14
C-4
E-10
E-12
A-2
E-8
A-1
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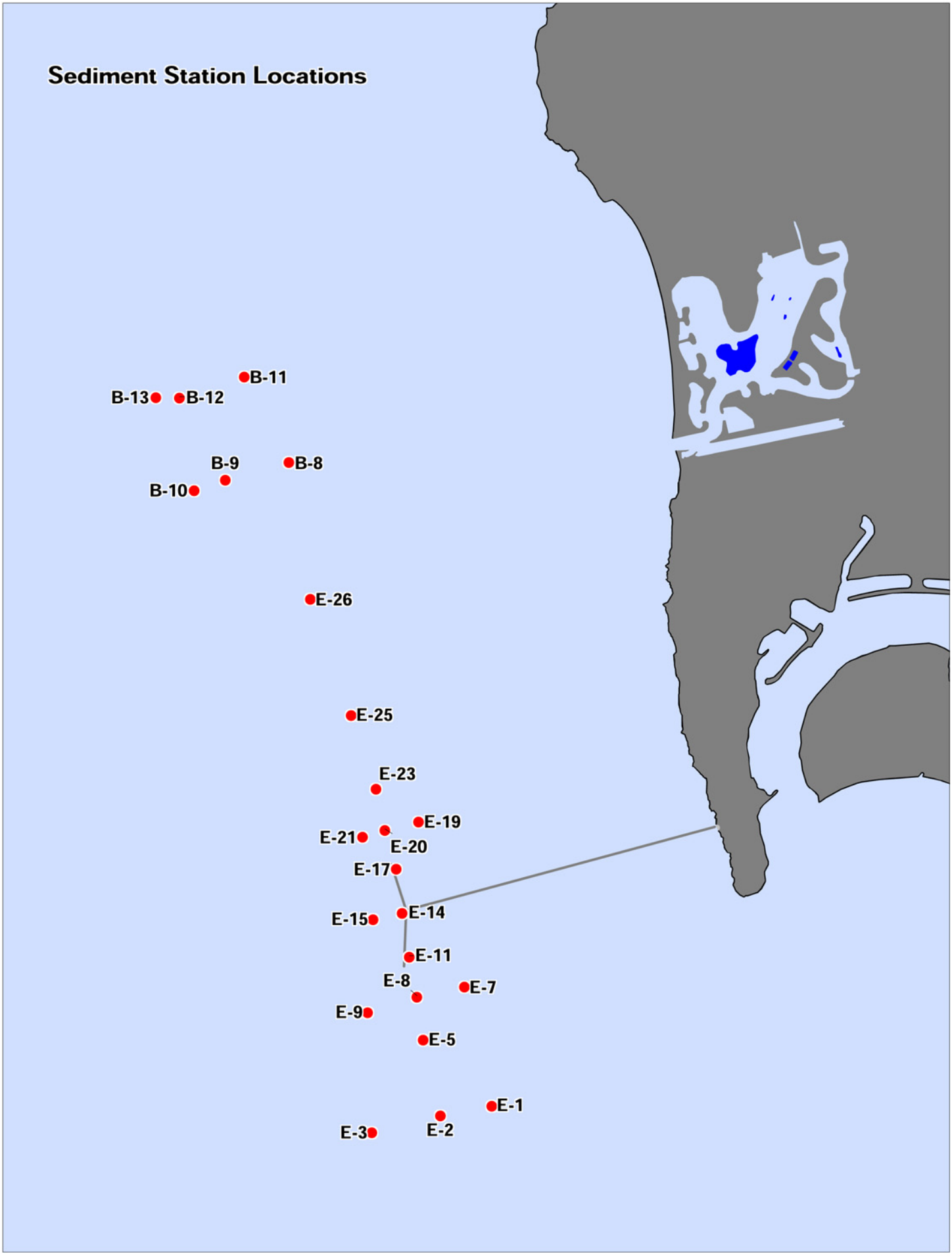
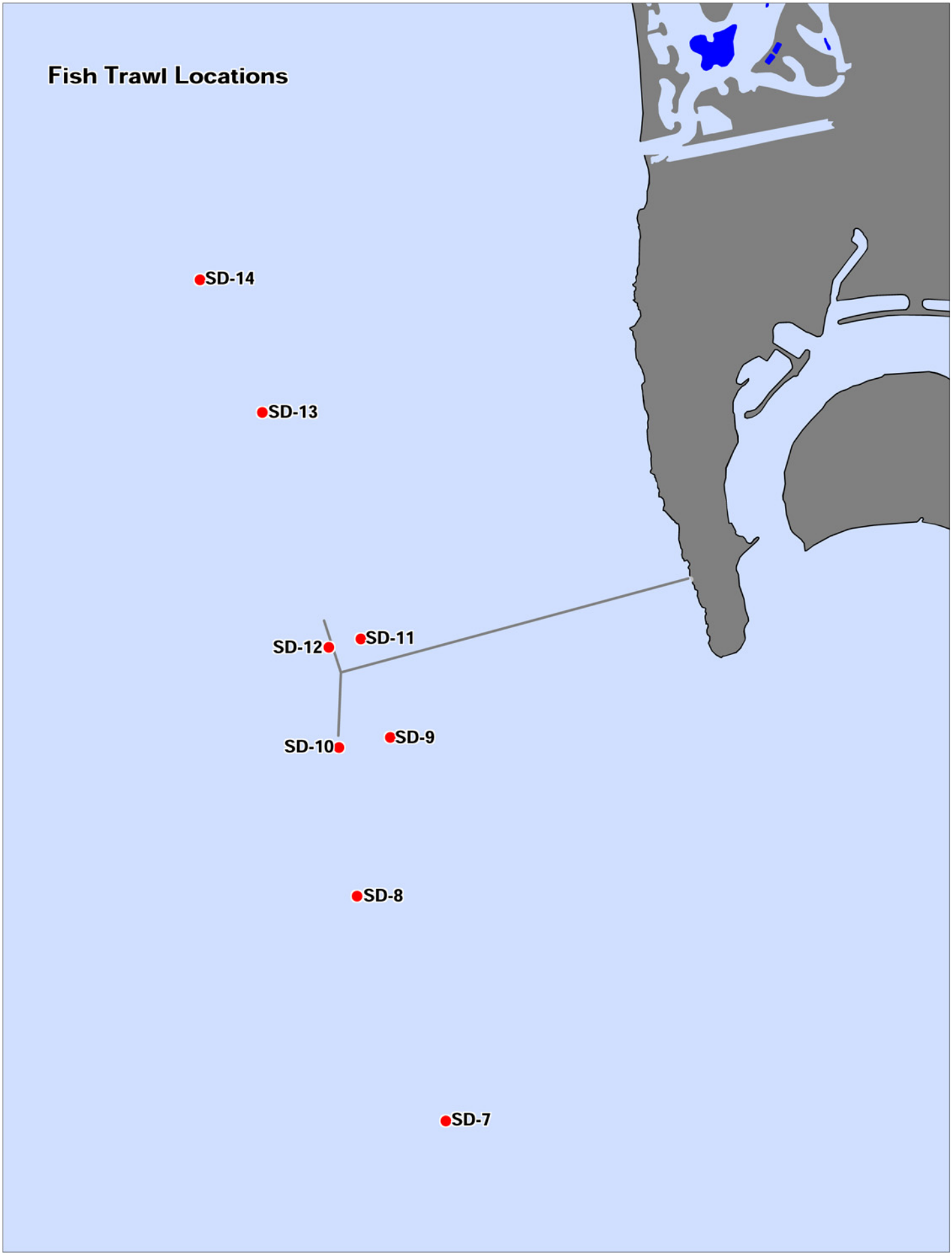
A-10
E-2
D1
B-1


Sediment Station Locations
B-11
B-13
B-12
B-9
B-8
B-10
E-26
E-25
E-23
E-19
E-21
E-20
E-17
E-15
E-14
E-11
E-8
E-7
E-9
E-5
E-1
E-3
E-2


Fish Trawl Locations
SD-14
SD-13
SD-12
SD-11
SD-10
SD-9
SD-8
SD-7