

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**ORDER NO. 2000-129
NPDES PERMIT NO. CA0109045**

**WASTE DISCHARGE REQUIREMENTS
FOR THE
CITY OF SAN DIEGO
SOUTH BAY WATER RECLAMATION PLANT**

**DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL**

SAN DIEGO COUNTY

Table of Contents

	Findings	2
A.	Prohibitions	9
B	Discharge Specifications	10
C	Receiving Water Limitations	18
D.	Pretreatment Requirements	24
E.	Sludge Requirements	27
F.	Provisions	29
G.	Reporting Requirements	39
H.	Notifications	47
I	Order No. 2000-129 Endnotes	48
J	Attachment No. 1 (Ocean Plan Discharge Prohibitions)	50
K	Attachment No. 2 (Basin Plan Discharge Prohibitions)	51
L	Attachment No. 3 (Standard Provisions)	53
M	Attachment No. 4 (40CFR Standard Provision References)	58
N	Monitoring and Reporting Program No. 2000-129	102
I.	Purpose	102
II.	Monitoring Provisions	102
III.	Influent Monitoring	105
IV.	Effluent Monitoring	106
V.	Land Outfall Monitoring	109
VI.	Receiving Water Monitoring	109
VII.	Monitoring and Reporting Program Endnotes	119
IX.	Monitoring Program Station Map	120

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

1. On November 18, 1999, the City of San Diego submitted an application for a National Pollution Discharge Elimination System (NPDES) and Waste Discharge Requirements (WDR) for the discharge of up to 15 million gallons per day (MGallons/Day) of secondary and/or tertiary treated wastewater from the South Bay Water Reclamation Plant (SBWRP) to the Pacific Ocean through the South Bay Ocean Outfall (SBOO). On July 20, 2000, Regional Board staff requested additional information in a letter to the City of San Diego. This information was furnished to the Regional Board on August 10, 2000. The application is complete and approved as of that date.
2. The 15 MGallon/Day SBRWP is currently under construction on a 22.3 acre site near Dairy Mart Road and Monument Road in the eastern portion of the Tijuana River Valley. The site is approximately 300 feet north of the international boundary between Mexico and the United States and approximately 2000 feet west of the International Wastewater Treatment Plant. The SBWRP will treat raw wastewater collected from the southern portion of the City of San Diego, the City of Imperial Beach, the City of Chula Vista, and unincorporated portions of south and east county. Construction should be completed in July, 2001.
3. The SBWRP, when operational, will produce tertiary treated reclaimed water which will be transmitted via a reclaimed water distribution system to qualified reclaimed water customers within the service area. A separate report of waste discharge was submitted to the Regional Board to apply for waste discharge requirements to regulate the proposed

land application of SBWRP's tertiary treated wastewater. All SBWRP tertiary treated wastewater in excess of reclaimed water demands will be discharged to the Pacific Ocean through the SBOO. Wastewater discharged to the Pacific Ocean will be treated to secondary and/or tertiary treatment standards. It is anticipated that during the dry season from May through November, most of the effluent up to 15 MGallons/Day will be used for reclamation and little, if any, effluent will be discharged to the Pacific Ocean.

4. The SBWRP's primary and secondary processes will consist of influent screening using mechanically cleaned bar screens, grit removal using aerated grit chambers, primary sedimentation clarifiers with chain and flight sludge collectors and tilting trough scum collectors, primary effluent flow equalization storage tanks, air activated sludge biological treatment with anoxic selector, and secondary clarifiers with chain and flight sludge collectors. The tertiary treatment process will consist of filter feed pumping, coagulation with chemical addition, direct filtration with conventional deep bed mono-media filters, backwash facilities, and disinfection using ultraviolet light. Sludge processing will be handled at the Point Loma Wastewater Treatment Plant (PLWWTP). Solids from the SBWRP will be pumped to the PLWWTP through the South Metro Interceptor.
5. The existing SBOO was constructed for use by the International Wastewater Treatment Plant (IWTP) which is operated by the International Boundary and Water Commission (IBWC), and the City of San Diego's SBWRP. The SBOO extends westward approximately 23,600 feet from the mouth of the Tijuana River and terminates in a "wye" diffuser with two 1980 foot long diffusers. The IWTP currently discharges a maximum of 25 MGD of advanced primary treated wastewater from the City of Tijuana. This discharge is regulated by Regional Board Order No. 96-50 (NPDES Permit No. CA0108928). The total average design capacity of the outfall is 174 MGallons/Day with a peak hydraulic capacity of 233 MGallons/Day. The effluent from the SBWRP is combined with the effluent from the IWTP within the SBOO prior to discharge to the Pacific Ocean.
6. Staff of the State Water Resources Control Board determined the minimum initial dilution for the SBOO to be 110, using the computer model UMERGE (to assess initial dilution) and TRACKER (to assess retrainment). The preliminary design and as-built conditions are listed below. The as-built outfall should provide improved initial dilution performance. To be conservative, the Regional Board will use a 100: 1 initial dilution for a 174 mgd design flow, the same as for the International Wastewater Treatment Plant.

<u>Parameter</u>	<u>Preliminary Design</u>	<u>As-Built</u>
a) Capacity (maximum rated peak)		233 MGallons/Day
b) Capacity (average daily flow)	232 MGallons/Day	174 MGallons/Day

c) Diffuser Length	2400 feet	1980 feet
d) Distance offshore from inboard diffuser end	-----	23,600 feet
e) Orientation of diffuser	Wye diffuser with 2 legs	
f) Number of Ports	600	660
g) Port Location and Spacing	On alternate sides of the diffuser at 8 foot spacing	On alternate sides of the diffuser at 6 foot spacing
h) Port Discharge Angle	Horizontal	
i) Average Port Diameter	3.0 inches	2.5 inches
j) Discharge depth	Approximately 85 feet	Approximately 93 feet

7. The SWRCB adopted a revised Water Quality Control Plan for Ocean Waters of California (California Ocean Plan) on July 23, 1997. The Ocean Plan identifies the following beneficial uses of state ocean waters to be protected:

- a. Industrial Water Supply
- b. Navigation
- c. Contact Water Recreation
- d. Non-contact Water Recreation
- e. Commercial and Sport Fishing
- f. Preservation and Enhancement of Areas of Special Biological Significance
- 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 discharge to the ocean, quality requirements for waste discharges (effluent water quality requirements), discharge prohibitions, and general provisions.

8. The Comprehensive Water Quality Control Plan Report, San Diego Basin (9). (Basin Plan) was adopted by this Regional Board on March 17, 1975 and subsequently approved by the SWRCB. Subsequent revisions to the Basin Plan have also been adopted by the Regional Board and approved by the SWRCB. At the time of preparation of this Order, the most recent revision to the Basin Plan was dated March 17, 1998.
9. The Basin Plan identifies the following beneficial uses of state ocean waters to be protected:
 - a. Industrial Service Supply (IND)
 - b. Navigation (NAV)
 - c. Contact Water Recreation (REC-1)
 - d. Non-contact Water Recreation (REC-2)
 - e. Commercial and Sport Fishing (COMM)
 - f. Preservation of Biological Habitats of Special Significance (BIOL)
 - f. Wildlife Habitat (WILD)
 - h. Rare, Threatened, or Endangered Species (RARE)
 - i. Marine Habitat (MAR)
 - j. Aquaculture (AQUA)
 - k. Migration of Aquatic Organisms (MIGR)
 - l. Spawning, Reproduction, and/or Early Development (SPWN)
 - m. Shellfish Harvesting (SHELL)

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

10. Receiving Water Limitation No. C.1.a. (2) of this Order establishes bacterial objectives for areas where shellfish may be harvested for human consumption, as determined by the Regional Board. As of the date of adoption of this Order, however, this Regional Board has not designated any shellfish harvesting area. If and when this Regional Board, in consultation with the Department of Fish and Game, health agencies, and other interested parties, does designate shellfish harvesting areas in the vicinity of this discharge, this Order will be amended to identify the area(s) to which Receiving Water Limitation No. C.1.a. (2) applies.

11. The 1997 Ocean Plan, Chapter V, **Discharge Prohibitions**, states that, "Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas." As used in the Ocean Plan, waste includes a discharger's total discharge, of whatever origin (i.e., gross discharge, not net discharge).
12. Federal regulations (40 CFR Part 403) establish pretreatment **program** requirements for POTW's which receive pollutants from industries subject to pretreatment standards. This Order contains industrial pretreatment program requirements pursuant to 40 CFR Part 403 (See Pretreatment Requirements, Section D). On July 1, 1982, the USEPA, Region 9, granted final pretreatment program approval to the City of San Diego. The ongoing approved pretreatment program for the Point Loma Wastewater Treatment Plant will be applicable to the SBWRP and its entire service area. The City of San Diego, as the lead agency, is responsible for the pretreatment program in the area tributary to the SBWRP.
13. On November 16, 1990, the USEPA promulgated NPDES permit application requirements for storm water discharges (40 CFR Parts 122, 123, and 124) which are applicable to wastewater treatment facilities. On April 17, 1997, the State Water Resources Control Board adopted Water Quality Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated With Industrial Activities Excluding Construction Activities. Therefore, storm water discharges from SBWRP's wastewater treatment facilities are subject to the terms and conditions of Water Quality Order No. 97-03-DWQ, as amended.
14. Municipal storm water discharges are regulated separately under NPDES Order No. 90-42 (CA0108758), Waste Discharge Requirements for Storm Water and Urban Runoff from the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District. The City of San Diego is a co-permittee in Order No. 90-42.
15. On February 19, 1993, the USEPA issued the final rule for the use and disposal of sewage sludge (40 CFR Part 503). This regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. USEPA, not this Regional Board, will oversee compliance with 40 CFR Part 503. Biosolids from SBWRP's primary and secondary facilities will be directed back into the South Bay Interceptor for processing at the Point Loma Wastewater Treatment Plant. (See Sludge Requirements, Section E.).
16. Section 301(b)(1)(B) of the Clean Water Act (CWA) requires POTWs to meet effluent limitations based on secondary treatment as defined by the USEPA Administrator. Secondary treatment is defined by the USEPA Administrator in the Code of Federal Regulations (40 CFR Part 133.100 to 40 CFR Part 133.105) in terms of three parameters: 5-day biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH. Federal regulations allow substitution of 5-day carbonaceous biochemical oxygen

demand (CBOD₅) limitations for BOD₅ limitations. Discharge Specification B.1.a. of this Order establishes effluent limitations for BOD₅, TSS, and pH in accordance with federal secondary treatment regulations. In addition, Discharge Specification B.1.a of this Order establishes "Maximum at Any Time" limitations for BOD₅ and TSS based on best professional judgement. The Maximum Emission Rate limitations for BOD₅ and TSS are based on a flowrate of 15 Million Gallons/Day.

17. 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 Regional Board has taken into consideration the requirements of the State and Federal "antidegradation" policies in establishing the requirements contained herein, and has determined that any reduction in water quality as a result of this discharge will not result in any long-term deleterious effects on water quality.
18. 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, and 405 of the CWA, as amended (Title 33 United States Code (USC) 1251 et seq.), are applicable to the discharge permitted by this Order.
19. On May 9, 1996, this 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 G.5 for the requirements that apply to sewage spills occurring at wastewater treatment facilities.
20. Monitoring and Reporting Program No. 2000-129 may be subject to changes during the 5-year period of this permit. The Southern California Coastal Water Research Project (SCCWRP) is currently investigating more effective techniques to monitor receiving waters of the Pacific Ocean. Once the SCCWRP study is complete, these methods may be incorporated into this Order's Monitoring and Reporting Program through an Addendum to this Order.
21. 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 that 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.
22. The diversion of dry-weather, low-volume storm water system flows to the sanitary sewer collection systems for treatment at the SBWRP may be considered for implementation during the five-year period of this Order. The purpose of the diversion of these “nuisance” flows is to mitigate the possible threat to public health caused by high bacteria levels and other contaminants associated with urban runoff. If the City of San Diego approves the design and implementation of such a system, it will be the City’s responsibility to assure that such a practice does not result in the violation of any requirement of this Order.
23. Under the provisions of the California Environmental Quality Act (CEQA), the City of San Diego prepared Environmental Impact Report, South Bay Water Reclamation Plant and Dairy Mart Road and Bridge Improvements to assess environmental impacts associated with the construction of the SBWRP, the distribution and use of reclaimed water from the SBWRP, and the discharge of excess reclaimed water to the ocean. The Environmental Impact Report (EIR) evaluated an originally proposed 7 mgd Phase 1 facility with a proposed expansion to 14 mgd. The EIR concluded that the proposed construction and operation of the facility would not result in any significant water quality or other environmental impacts. The San Diego City Council adopted the findings of the EIR and certified compliance with CEQA on May 17, 1997.
24. To address the expansion of the SBWRP to 15 mgd, the City prepared an EIR addendum “ Addendum to Environmental Impact Report, Expansion of the Capacity of the Planned/Approved South Bay Water Reclamation Plant. The Addendum concluded that no new CEQA findings were required for the proposed project. The Addendum was issued by City of San Diego staff on May 27, 1999. In accordance with the provisions of CEQA, no public review or City Council action was required for the EIR Addendum.

25. The Regional Board has notified the City of San Diego and all known interested parties of its intent to issue this NPDES permit for the discharge of secondary and/or tertiary wastewater from the SBWRP through the SBOO to the Pacific Ocean.
26. The Regional Board, in a public hearing on September 13, 2000, heard and considered all comments pertaining to the discharge from the SBWRP to the Pacific Ocean.
27. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit for the City of San Diego's SBWRP discharge through the SBOO to the Pacific Ocean pursuant to Section 402 of the Clean Water Act, 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 through the South Bay Ocean Outfall (SBOO).

A. PROHIBITIONS

1. Discharges of wastes in a manner or to a location which have not been specifically authorized by this Order and for which valid waste discharge requirements are not in force are prohibited.
2. The discharge of any radiological, chemical, or biological warfare agent, or high level radiological waste to the ocean is prohibited.
3. The dumping or deposition, from shore or from vessels, of oil, garbage, trash or other solid municipal, industrial, or agricultural waste directly into waters subject to tidal action or adjacent to waters subject to tidal action in any manner which may permit it to be washed into waters subject to tidal action is prohibited.
4. Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.
5. 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.
6. The discharge of sludge digester supernatant directly to the ocean, or into a waste stream that discharges to the ocean, without further treatment is prohibited.
7. The bypassing of untreated wastes containing concentrations of pollutants in excess of the effluent limitations of this Order to the ocean is prohibited, except as provided for in

Provision F.36 of this Order.

8. Discharge through the SBOO from any treatment facility at a 30-day average dry weather flowrate in excess of the secondary treatment design capacity of that treatment facility is prohibited. For the purposes of this Order, the secondary treatment design capacity of a treatment facility is the existing secondary treatment design capacity of that treatment facility identified in the findings of this Order unless the discharger obtains the Executive Officer's approval of a revised design capacity in accordance with Provision F.17.
9. Discharge to the Pacific Ocean from the SBWRP in excess of 15 MGD is prohibited unless the discharger obtains revised waste discharge requirements authorizing an increased flowrate.
10. Compliance with Discharge Prohibitions as stated in Chapter V of the 1997 Ocean Plan (Attachment No. 1) is required as a condition of this Order.
11. Compliance with the Waste Discharge Prohibitions contained in the 1994 Basin Plan (Attachment No. 2) is required as a condition of this Order.
12. The discharge of industrial wastewaters exclusive of cooling water, clear brine or other waters which are essentially chemically unchanged, into waters subject to tidal action is prohibited.
13. The dumping or deposition of chemical agents or explosives into waters subject to tidal action is prohibited.

B. DISCHARGE SPECIFICATIONS

1. The following effluent limitations apply to the wastewater discharged from the South Bay Water Reclamation Facility (SBWRP) through the South Bay Ocean Outfall (SBOO).

a. Effluent Limitations for Major Constituents and Properties of Wastewater

Constituent/ Property	Units	Monthly Average (30 day)	Weekly Average (7 day)	Maximum at any time
BOD ₅ ^{1,2}	mg/L	30	45	50
	lb/Day	3,750	5,630	6,260
Total suspended solids ^{1,2}	mg/L	30	45	50
	lb/Day	3,750	5,630	6,260
Oil & grease'	mg/L	25	40	75
	lb/Day	3,130	5,000	9,380

Settleable solids ²	mL/L	1.0	1.5	3.0
Turbidity ²	NTU	75	100	225
pH ^{1,2}	PH unit	Within limits of 6.0 - 9.0 at all times.		
acute toxicity	TUa	1.5	2.0	2.5

b. Effluent Limitations on Toxic Materials for Protection of Marine Aquatic Life³

Constituent/ Property	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Arsenic	mg/L lb/Day	0.51 125	2.9 363	7.8 975
Cadmium	mg/L lb/Day	0.1 12	0.4 50	1.0 125
Chromium (hexavalent) ⁴	mg/L lb/Day	0.2 25	0.81 100	2.0 250
Copper	mg/L lb/Day	0.1 12	1.0 125	2.8 350
Lead	mg/L lb/Day	0.2 25	0.81 100	2.0 250
Mercury	ug/L lb/Day	4.0 0.5	16.0 2	40.0 5
Nickel	mg/L lb/Day	0.51 64	2.0 250	5.1 640
Selenium	mg/L lb/Day	1.5 190	6.1 760	15 1880
Silver	ug/L lb/Day	29 3.6	165 21	438 55
Zinc	mg/L lb/Day	1.2 150	7.3 910	19 2380
Cyanide'	mg/L lb/Day	0.1 12	0.4 50	1.0 125
Total chlorine residual ⁶	mg/L lb/Day	0.2 25	0.81 100	6.1 760

Constituent/ Property	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Ammonia (as N)	mg/L lb/Day	61 7500	240 30,000	610 76,300
Chronic toxicity	TUc	--	100	--
Phenolic compounds (non-chlorinated)	mg/L lb/Day	3.0 375	12 1,500	30 3,750
Chlorinated Phenolics	mg/L lb/Day	0.1 12	0.4 50	1.0 125
Endosulfan ⁷	ug/L lb/Day	0.91 0.11	1.8 0.22	2.7 0.33
Endrin	ug/L lb/Day	0.2 0.025	0.4 0.05	0.61 0.076
HCH ⁸	ug/L lb/Day	0.4 0.05	0.81 0.10	1.2 0.15
Radioactivity ⁹	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subsection 4, Group 3, Article 1, Section 30253 of the California Code of Regulations.			

c. Effluent Limitations for Toxic, Non-carcinogenic Materials for Protection of Human Health³

Constituent/ Property	Units	Monthly Average (30-day)
Acrolein	mg/L lb/Day	22 2,750
Antimony	mg/L lb/Day	120 15,010
Bis(2-chloroethoxy) methane	ug/L lb/Day	440 55
Bis(2-chloroisopropyl) ether	mg/L lb/Day	120 15,010
Chlorobenzene	mg/L lb/Day	58 7,250

Constituent/ Property	Units	Monthly Average (30-day)
Chromium (III) ⁴	g/L lb/Day	19 2,400,000
Di-n-butyl phthalate	Mg/L lb/Day	350 43,800
Dichlorobenzenes ¹⁰	g/L lb/Day	0.52 65,000
1,1-dichloroethylene	g/L lb/Day	0.72 90,000
Diethyl phthalate	g/L lb/Day	3.3 412,000
Dimethyl phthalate	g/L lb/Day	83 10,400,000
4,6-dinitro-2-methylphenol	mg/L lb/Day	22 2,750
2,4-dinitrophenol	ug/L lb/Day	400 50
Ethylbenzene	mg/L lb/Day	410 51,300
Fluoranthene	mg/L lb/Day	1.5 188
Hexachlorocyclopentadiene	mg/L lb/Day	5.9 740
Isophorone	g/L lb/Day	15 1,880,000
Wrobenzene	ug/L lb/Day	490 61
Thallium	mg/L lb/Day	1.4 175
Toluene	g/L lb/Day	8.5 1,060,000
1,1,2,2-tetrachloroethane	mg/L lb/Day	120 15,000

Constituent/ Property	Units	Monthly Average (30-day)
Tributyltin	ug/L lb/Day	0.14 0.017
1,1,1-trichloroethane	g/L lb/Day	54 6,750,000
1,1,2-trichloroethane	g/L lb/Day	4.3 540,000

d. **Effluent Limitations for Toxic, Carcinogenic Materials for Protection of Human Health³**

Constituent/ Property	Units	Monthly Average (30-day)
Acrylonitrile	ug/L lb/Day	10 1.25
Aldrin	ng/L lb/Day	2.2 0.00027
Benzene	mg/L lb/Day	0.6 74
Benzidine	ng/L lb/Day	6.9 0.00086
Beryllium	ug/L lb/Day	3.3 0.41
Bis(2-chloroethyl) ether	ug/L -lb/Day	4.5 0.56
Bis(2-ethylhexyl) p h t h a l a t e	ug/L lb/Day	350 43.8
Carbon tetrachloride	ug/L lb/Day	90 11.2
Chlordane ¹¹	ng/L lb/Day	2.3 0.00028
Chloroform	mg/L lb/Day	13 1,626

Constituent/ Property	Units	Monthly Average (30-day)
DDT ¹²	ng/L lb/Day	17 0.00026
1,4-dichlorobenzene	mg/L lb/Day	1.8 225
3,3-dichlorobenzidine	ug/L lb/Day	0.81 0.10
1,2-dichloroethane	mg/L lb/Day	13 1,626
Dichloromethane	mg/L lb/Day	45 5,630
1,3-dichloropropene	mg/L lb/Day	0.89 111
Dieldrin	ng/L lb/Day	4.0 0.0005
2,4-dinitrotoluene	ug/L lb/Day	260 32.5
1,2-diphenylhydrazine	ug/L lb/Day	16 2.0
Halomethanes ¹³	mg/L lb/Day	13.0 1,620
Heptachlor ¹⁴	ng/L lb/Day	72.0 0.0009
Hexachlorobenzene	ng/L lb/Day	21.0 0.0026
Hexachlorobutadiene	mg/L lb/Day	1.4 175
Hexachloroethane	ug/L lb/Day	250.0 31
N-nitrosodimethylamine	mg/L lb/Day	0.73 92
N-nitrosodiphenylamine	ug/L lb/Day	250.0 31

Constituent/ Property	units	Monthly Average (30-day)
PAHs ¹⁵	ug/L lb/Day	0.88 0.11
PCBs ¹⁶	ng/L lb/Day	1.9 0.00024
TCDD equivalents ¹⁷	pg/l lb/Day	0.39 0.000000048
Tetrachloroethylene	mg/L lb/Day	9.9 1240
Toxaphene	ng/L lb/Day	21.0 0.0026
Trichloroethylene	mg/L lb/Day	2.7 337
2,4,6-trichlorophenol	ug/L lb/Day	29.0 3.6
Vinyl chloride	mg/L lb/Day	3.6 450

mg/L = milligrams per liter

ug/L = micrograms per liter

ng/L = nanograms per liter

pg/L = picograms per liter

mL/L = milliliters per liter

NTU = Nephelometric Turbidity Units

TUa = toxic units acute

TUc = toxic units chronic

lb/Day = pounds per day

2. Any significant change in waste flow shall be cause for reevaluating effluent quality requirements.
3. The 30-day average percent removal of BOD₅ and the 30-day average percent removal of TSS shall each not be less than 85 percent.
4. 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.
5. Waste discharged through the SBOO must be essentially free of:
 - a. Material that is floatable or will become floatable upon discharge.

- b. Settleable material or substances that form sediments which 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.
6. Waste discharged through the SBOO shall be discharged in a manner that provides sufficient initial dilution to minimize the concentrations of substances not removed in treatment.
7. 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.

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 shall 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 accordance with all applicable local, state, and federal laws and regulations.

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

C. RECEIVING WATER LIMITATIONS

1. The discharge of waste from the SBWRP through the SBOO shall not cause, or contribute to, a violation of the following Ocean Plan ocean 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 the purpose of the bacterial standards of this Order, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy

of Macrocvstis and Nereocvstis 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:

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, 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 shall 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.

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 a 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 a 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) 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 that 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. Toxic Materials

The discharge of waste from the SBWRP through the SBOO shall not cause, or contribute to, 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 the 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
Mercury	ug/L	0.04	0.16	0.4
Nickel	ug/L	5	20	50
Selenium	ug/L	15	60	150
Silver	ug/L	0.45	1.8	4.5
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
Chronic toxicity	TUc	--	1	--
Phenolic compounds (non-chlorinated)	ug/L	30	120	300
Chlorinated phenolics	ug/L	1	4	10
Endosulfan ⁷	ug/L	0.009	0.018	0.027
Endrin	ug/L	0.002	0.004	0.006
HCH ⁸	ug/L	0.004	0.008	0.012
Radioactivity ⁹	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subsection 4, Group 3, Article 3, Section 30269 of the California Code of Regulations.			

b. Water Quality Objectives for the Protection of Human Health -- Noncarcinogens

Chemical	Units	30-Day Average
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)	I ug/L I	190,000
di-n-butyl phthalate	I ug/L I	3,500
Dichlorobenzenes ¹⁰	I ug/L I	5,100
1,1-dichloroethylene	I ug/L I	7,100
Diethyl phthalate	ug/L	33,000
Dimethyl phthalate	ug/L	820,000
4,6-dinitro-2-methylphenol	ug/L	220
2,4-dinitrophenol	I ug/L I	4.0
Ethylbenzene	ug/L	4,100
Fluoranthene	ug/L	15
Hexachlorocyclopentadiene	ug/L	58
Isophorone	ug/L	150,000
Nitrobenzene	ug/L	4.9
Thallium	ug/L	14
Toluene	ug/L	85,000
1,1,2,2-tetrachloroethane	ug/L	1,200
Tributyltin	I ug/L I	0.0014
1,1,1-trichloroethane	I ug/L I	540,000
1,1,2-trichloroethane	ug/L	43,000

c. Water Quality Objectives for the Protection of Human Health -- Carcinogens

Chemical	Units	30-Day Average
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 ¹¹	ug/L	0.000023
Chloroform	ug/L	130
DDT ¹²	ug/L	0.00017
1,4-dichlorobenzene	ug/L	18
3,3-dichlorobenzidine	ug/L	0.0081
1,2-dichloroethane	ug/L	130
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 ¹³	ug/L	130
Heptachlor ¹⁴	ug/L	0.00072
Hexachlorobenzene	ug/L	0.00021
Hexachlorobutadiene	ug/L	14
Hexachloroethane	ug/L	2.5
N-nitrosodimethylamine	ug/L	7.3
N-nitrosodiphenylamine	ug/L	2.5

Chemical	Units	30-Day Average
PAHs ¹⁵	ug/L	0.0088
PCBs ¹⁶	ug/L	0.000019
TCDD equivalents ¹⁷	pg/L	0.0039
Tetrachloroethylene	ug/L	99
Toxaphene	ug/L	0.00021
Trichloroethylene	ug/L	27
2,4,6-trichlorophenol	ug/L	0.29
Vinyl chloride	ug/L	36

mg/L = milligrams per liter
 ug/L = micrograms per liter
 ng/l = nanograms per liter
 pg/l = picograms per liter
 NTU = Nephelometric Turbidity Unit
 TUc = toxic units chronic

D. PRETREATMENT REQUIREMENTS

1. The discharger shall be responsible and liable for the performance of all pretreatment requirements contained in 40 CFR 403, including any subsequent revisions to 40 CFR 403. Where 40 CFR 403 or subsequent revisions place mandatory actions upon the discharger, but do not specify a timetable for completion, the discharger shall complete the mandatory actions within six months of the issuance date of this Order, 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 USEPA and/or the Regional Board, as provided in the CWA and/or the Porter-Cologne Water Quality Control Act (CWC), respectively.
2. The discharger shall implement and enforce its approved Pretreatment Program, and all subsequent revisions, which are hereby made an enforceable condition of this Order. 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 industrial 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 industrial user, upon commencement of the discharge.

3. The discharger shall perform the pretreatment functions as required in 40 CFR 403 and in 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. By March 1 of each year, the discharger shall submit an annual report to: the Regional Board; the USEPA, Region 9; the State Water Resources Control Board, Division of Water Quality, Regulatory Unit; and the San Diego County Department of Environmental Health, Hazardous Materials Management Division, describing the discharger's pretreatment activities over the previous calendar year (See Reporting Requirement G. 19 of this Order for contact information). In the event that the discharger is not in compliance with any condition or requirement of this Order, or any pretreatment compliance inspection/audit requirements, the discharger shall also include the reasons for noncompliance and state how and when the discharger shall comply with such conditions and requirements. The annual 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 discharger's influent and effluent for those pollutants that the USEPA has identified under Section 307(a) of the CWA, and which are known or suspected to be discharged by industrial users. The summary will consist of an annual full priority pollutant scan. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis stated in the Monitoring and Reporting Program of this Order. The discharger shall also provide influent and effluent monitoring data for non-priority pollutants which the discharger believes may be causing or contributing to interference, pass-through, or adversely impacting sludge quality. The discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed in Section E., *Sludge Requirements*, of this Order. Wastewater sampling and analysis shall be performed in accordance with 40 CFR 136 and amendments thereto.
 - b. A discussion of upset, interference, or pass-through incidents, if any, at the POTW(s) which the discharger knows or suspects were caused by industrial users. The discussion shall include the reasons the incidents occurred, the corrective actions taken, and, if known, the name and address of the industrial 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 limitations, are necessary to prevent pass-through, interference, or

noncompliance with sludge disposal requirements.

- c. An updated list of the discharger's significant industrial users, including their names and addresses, and showing a list of additions, deletions, or name changes keyed to the previously submitted list. The list shall identify the industrial users subject to Federal Categorical Standards by specifying which standards are applicable. The list shall indicate which significant (non-categorical) industrial users are subject to local discharge limitations.
- d. The discharger shall characterize the compliance status of each significant industrial user (SIU) by providing a list or table containing the following:
 - (1) Name of SIU and category if subject to categorical standards;
 - (2) Type of wastewater treatment or control processes in place;
 - (3) Number of samples taken by the SIU during the year;
 - (4) Number of samples taken and inspections performed by the discharger during the year;
 - (5) For an SIU subject to discharge requirements for total toxic organics (TTO), whether all required certifications were provided;
 - (6) A list of pretreatment standards (categorical or local) violated during the year, or any other violations;
 - (7) Industries in significant noncompliance (SNC) as defined in 40 CFR 403.8(f)(2)(vii) at any time during the year;
 - (8) A summary of enforcement actions or any other actions taken against SIU(s) during the year. Describe the type of action, final compliance date, and the amount of fines and/or penalties collected, if any. Describe any proposed actions for bringing an SIU into compliance;
 - (9) The name(s) of any SIU(s) required to submit a baseline monitoring report (BMR), and any SIU(s) currently discharging under a BMR; and
 - (10) The name(s) of any IU(s) preparing and/or implementing a pollution prevention plan.
- e. A brief description of any programs the discharger implements to reduce pollutants from industrial users 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 in the program's administrative structure, local limits, monitoring program, legal authority, enforcement policy, and funding and staffing levels;
- g. A summary of the annual pretreatment program budget, including the cost of pretreatment program functions and equipment purchases;
 - h. A summary of activities to involve and inform the public of the pretreatment program including a copy of the newspaper notice, if any, required under 40 CFR 403.8(f)(2)(vii);
 - i. A description of any changes in sludge disposal methods; and
 - j. A discussion of any concerns not described elsewhere in the annual report.
5. The discharger shall submit a semi-annual **SIU** compliance status report to the Regional Board, the State Water Resources Control Board, and the **USEPA**. The report shall cover the period of January 1 through June 30, and shall be submitted no later than September 1. The report shall identify:
- a. The names and addresses of all **SIUs** which violated any discharge or reporting requirements during the semi-annual reporting period;
 - b. A description of the violations including whether the discharge violations were for categorical standards or local limits;
 - c. A description of the enforcement actions, or other actions taken to remedy the noncompliance;
 - d. The status of active enforcement actions, or other actions taken in response to **SIU** noncompliance identified in previous reports; and
 - e. The status of any **IU**'s preparing and/or implementing pollution prevention plans.
6. The discharger shall continue with its implementation of a Nonindustrial Source Control Program consisting of a public education program designed to minimize the entrance of non-industrial toxic pollutants and pesticides into the sanitary sewer system. The Non-industrial Source Control Program shall be reviewed periodically and addressed in the annual report.

E. SLUDGE REQUIREMENTS

- 1. Management of all solids and sludge must comply with all requirements of CFR Parts 251,258, 501, and 503, including all monitoring, record-keeping, and reporting requirements. Since the State of California, hence the Regional and State Boards, has not been delegated the authority by the **USEPA** to implement the sludge program,

enforcement of sludge requirements of CFR Part 503 is under USEPA's jurisdiction.

2. The permittee shall ensure that all biosolids produced at its facility are used or disposed of in compliance with the applicable portions of:
 - a. 40 CFR 503: for biosolids which are land applied (placed on the land for the purpose of providing nutrients or conditioning the soil for crops or vegetation), placed in surface disposal sites (placed on the land for the purpose of disposal), stored, or incinerated;
 - b. 40 CFR 258: for biosolids disposed in a municipal solid waste landfill;
 - c. 40 CFR 257: for other disposal practices.

The permittee is responsible for ensuring compliance with these regulations whether the permittee uses or disposes of the biosolids itself or contracts with another party for further treatment, use, or disposal. The permittee is responsible for informing subsequent preparers, applicators, and disposers of the requirements that they must meet under 40 CFR 257, 258, and 503.

3. Notification of non-compliance: The permittee shall notify EPA Region 9, the San Diego Regional Board, and the Regional Board located in the region where the biosolids are used or disposed, of any non-compliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the permittee shall notify EPA Region 9 and the Regional Boards of the non-compliance in writing within 5 working days of becoming aware of the non-compliance. See Attachment No. 5 for contact information.
4. Inspection and Entry: The Regional Board, EPA, or an authorized representative, upon the presentation of credentials, shall be allowed by the permittee, directly or through contractual arrangements with the permittee's biosolids contractors, a) to enter upon all premises where biosolids produced by the permittee are treated, stored, used, or disposed, b) to have access to and copy any records that must be kept under the conditions of this permit or of 40 CFR 503, and c) to inspect any facilities, equipment, or operations used by the permittee or its contractors in the production, treatment, storage, use, or disposal of the biosolids.
5. All the requirements of 40 CFR 503 and 23 CCR 15 are enforceable by the USEPA and this Regional Board whether or not the requirements are stated in an NPDES permit or any other permit issued to the discharger.
6. The discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that has a likelihood of adversely affecting human health or the environment.

7. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
8. The solids and sludge treatment and storage site shall have facilities adequate to divert surface water runoff from adjacent areas, to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection from at least a **100-year** storm and protection from the highest possible tidal stage that may occur.
9. The discharge of sewage sludge and solids shall not cause waste material to be in a position where it is, or can be, conveyed from the treatment and storage sites and deposited in the waters of the state.

F. PROVISIONS

1. The discharger must comply with all conditions of this Order. Any permit noncompliance constitutes a violation of the CWA and the California Water Code, and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of an application for permit renewal, modification, or reissuance.
2. The discharger must comply with **all** standard provisions, where applicable, as stated in 40 CFR 122.41 (Attachment No. 4) and the Standard Provisions (Attachment No. 3).
3. Neither the treatment nor the discharge of waste shall create a pollution, contamination, or nuisance as defined by Section 13050 of the California Water Code.
4. The following sections of 40 CFR (see Attachment No. 4) are incorporated into this permit by reference, and the discharger must comply with these provisions:
 - 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
5. This Order may be modified, revoked and reissued, or terminated for causes including,

but not limited to, the following:

- a. Violation of any terms or conditions of this Order.
- b. Obtaining this Order 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 authorized discharge.

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

6. If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Executive Officer may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.
7. The discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use and disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish those standards or prohibitions or standards for sewage sludge use or disposal, even if this Order has not yet been modified to incorporate the requirement.
8. The discharger shall comply with all existing federal and state laws and regulations that apply to its sewage sludge use and disposal practice(s), and with the CWA Section 405(d) and 40 CFR Part 257.
9. The discharger shall allow the Regional Board, or any Regional Board authorized representative, or any authorized representative of the USEPA (including an authorized contractor acting as a representative of the Regional Board or USEPA), upon the presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the discharger's premises where a regulated facility or activity is located or conducted, including sludge use and disposal activities, or where records must be kept under the conditions of this Order;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this Order

including sludge use and disposal sites; and

- d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order or as otherwise authorized by the CWA or California Water Code, any substances or parameters at any location.
10. This Order does not convey any property rights of any sort or any exclusive privilege. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from its liabilities under federal, state, or local laws, nor create a vested right for the discharger to continue its waste discharge.
11. It shall not be a defense for the discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. Upon reduction, loss, or failure of a treatment facility, the discharger shall, to the extent necessary to maintain compliance with this Order, control all discharges until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of a treatment facility fails, is reduced, or is lost.
12. Supervisors and operators of the discharger's wastewater treatment facilities shall possess a certificate of appropriate grade in accordance with Chapter 14 of Division 4 of Title 23 of the California Code of Regulations.
13. The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control including sludge use and disposal facilities (and related appurtenances) which are installed or used by the discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by the discharger only when the operation is necessary to achieve compliance with the conditions of this Order.
14. The discharger's wastewater treatment facilities shall be operated and maintained in accordance with the operation and maintenance manual(s) prepared by the discharger through the Clean Water Grant Program.
15. A copy of this Order 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.
16. The discharger shall comply with any interim effluent limitations as established by an addendum, enforcement action or revised waste discharge requirements which have been or may be adopted by this Regional Board.
17. 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 Order.

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 previously approved design capacity until:

- d. The certification report is received by the Executive Officer;
 - e. The Executive Officer has received written notification of the completion of construction (new treatment facilities and expansions only);
 - f. An inspection of the plant has been made by the Regional Board staff (new treatment facilities and expansions only); and
 - g. The Executive Officer has provided the discharger with written authorization to discharge at a 30-day average dry weather **flowrate** not to exceed the revised design capacity.
18. The discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.
 19. If only one sample is collected during the time period associated with the effluent limitations (e.g., 30-day average or 6-month median), the single measurement shall be used to determine compliance with the effluent limitation for the entire time period.
 20. All analytical data shall be reported uncensored with detection limits and quantitation limits identified. For any effluent limitation, compliance shall be determined using appropriate statistical methods to evaluate multiple samples. Sufficient sampling and analysis shall be conducted to determine compliance.

21. Compliance based on a single sample analysis shall be determined where appropriate as described below.
 - a. When a calculated effluent limitation is greater than or equal to the PQL (defined below), compliance shall be determined based on the calculated effluent limitation and either single or multiple sample analyses.
 - b. When the calculated effluent limitation is below the PQL, compliance determinations based on analysis of a single sample shall only be undertaken if the concentration of the constituent of concern in the sample is greater than or equal to the PQL.
 - c. When the calculated effluent limitation is below the PQL and recurrent analytical responses between the PQL and the calculated limit occur, compliance shall be determined by statistical analysis of multiple samples.
22. Published values for MDLs (defined below) and PQLs should be used except where revised MDLs and PQLs are available from recent laboratory performance evaluations, in which case the revised MDLs and PQLs should be used. Where published values are not available, the Executive Officer will determine appropriate values based on available information, including information submitted by the discharger upon request of the Executive Officer.
 - a. The Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B.
 - b. The Practical Quantitation Level (PQL) is the lowest concentration of a substance which can be consistently determined within $\pm 20\%$ of the true concentration by 75% of the labs tested in a performance evaluation study. Alternatively, if performance data are not available, the PQL for carcinogens is the MDL x 5, and for noncarcinogens is the MDL x 10.
23. When determining compliance based on a single sample, with a single effluent limitation which applies to a group of chemicals (e.g., PCBs), concentrations of individual members of the group may be considered to be zero if the analytical response for individual chemicals falls below the MDL for that parameter.
24. The 6-month median effluent concentration limitation 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. For intermittent discharges, the daily value shall be considered to equal zero for days on which no discharge occurred. The 6-month median receiving water limitation shall apply as a moving median of all values collected for any 180-day period.

25. The 30-day average effluent limitation shall be the moving arithmetic mean of daily concentrations over the specified 30-day period.
26. The 7-day average shall be the moving arithmetic mean of daily concentrations over the specified 7-day period.
27. The daily maximum effluent limitation shall apply to flow-weighted 24-hour composite samples. The daily maximum receiving water limitation shall apply to grab sample determinations.
28. The instantaneous maximum effluent limitation shall apply to grab sample determinations. The instantaneous maximum receiving water limitation shall apply to grab sample determinations.
29. The mass emission rate (MER), in pounds per day, shall be obtained from the following calculation for any calendar day:

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

in which Q and C are the flow rate in MGallons/ Day and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor with units of [lb/MGallons] / [mg/L]. 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.

30. Compliance with the Acute Toxicity limitation in Discharge Specification B.1.a. of this Order shall be determined using an established protocol, e.g., American Society for Testing Materials (ASTM), USEPA, American Public Health Association, or State Board. Acute Toxicity (TUa) shall be expressed in Toxic Units Acute (TUa), where:

$$TUa = \frac{100}{96\text{-hour } LC_{50}}$$

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

When it is not possible to measure the 96-hour LC_{50} due to greater than 50% survival of the test species in 100% waste, the toxicity concentration shall be calculated by the following:

$$TUa = \log (100 - S)$$

1.7

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

31. Compliance with the Chronic Toxicity effluent limitation established in Discharge Specification No. B.1.b of this Order shall be determined using critical life stage toxicity tests. Chronic Toxicity.(TUc) shall be expressed as Toxic Units Chronic (TUc), where:

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

where NOEL is the No Observed Effect Level and is expressed as the maximum percent effluent that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed below.

A minimum of three test species with approved test protocols shall be used to measure compliance with the chronic toxicity objective. If possible, the test species shall include a fish, an invertebrate, and an aquatic plant. After a screening period, monitoring may be reduced to the most sensitive species. Dilution and control water should be obtained from an unaffected area of the receiving waters. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with the test results.

The tests specified in the July 1997 Ocean Plan shall be used to measure TUc. Other tests may be added to the list when approved by the SWRCB.

32. If toxicity testing results show a violation of any acute or chronic toxicity limitation identified in Discharge Specification B.1 of this Order, the discharger shall:
- a. Take all reasonable measures necessary to immediately minimize toxicity; and
 - b. Increase the frequency of the toxicity test(s) that showed a violation to at least two times per month until the results of at least two consecutive toxicity tests do not show violations.

If the Executive Officer determines that toxicity testing shows consistent violation of any acute or chronic toxicity limitation identified in Discharge Specification B.1 of this Order, the discharger shall conduct a Toxicity Reduction Evaluation (TRE) which includes all reasonable steps to identify the source of toxicity. Once the source of toxicity is identified, the discharger shall take all reasonable steps to reduce the toxicity to meet the toxicity limitations identified in Discharge Specification B.1 of this Order.

Within fourteen days of completion of the TRE, the discharger shall submit the results of the TRE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with all the toxicity limitations of this Order

and prevent recurrence of violations of those limitations, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the Executive Officer.

33. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 MPN (most probable number). 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 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 USEPA) to be appropriate. Detection methods used for enterococcus shall be those presented in USEPA publication USEPA 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.

34. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

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

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL) found on each day of sampling.

35. As used in this Order, waste includes a discharger's total discharge, of whatever origin (i.e. gross, not net, discharge).

36. Bypass of Treatment Facilities

a. Definitions

- (1) "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not Exceeding Limitations

The discharger may allow any bypass to occur which does not cause effluent limitations of this Order or the concentrations of pollutants set forth in Ocean Plan Table A or Table B to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of

paragraphs c. and d. of this provision.

c. Notice

- (1) Anticipated bypass. If the discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The discharger shall submit notice of an unanticipated bypass as required in Reporting Requirement G.11 of this Order.

d. Prohibition of Bypass

- (1) Bypass is prohibited and the Regional Board may take enforcement action against the discharger for bypass, unless:
 - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (c) The discharger submitted notices as required under paragraph c. of this provision.
- (2) The Executive Officer may approve an anticipated bypass, after considering its adverse effect, if the Executive Officer determines that it will meet the three conditions listed in paragraph d.(1) of this provision.

37. Upset

a. Definition

“Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. Effect of an Unset

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph c. of this provision are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions Necessary for a Demonstration of Unset

A discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the discharger can identify the cause(s) of the upset;
- (2) The permitted facility was at the time being properly operated;
- (3) The discharger submitted notice of the upset as required in Reporting Requirement G.11 of this Order; and
- (4) The discharger complied with any remedial measures required under Provision F. 18 of this Order.

d. Burden of Proof

In any enforcement proceeding the discharger seeking to establish the occurrence of an upset has the burden of proof.

38. The discharger shall maintain a Sewer Ovefflow 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 service areas of the SBWRP. 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.
39. The discharger shall maintain a Sewer Overflow Response Plan (SORP) for the SBWRP. The SORP shall establish procedures for responding to sewer overflows 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. 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.

G. REPORTING REQUIREMENTS

1. The discharger must comply with standard monitoring and reporting requirements, where applicable, as stated in 40 CFR 122.41 (Attachment No. 4) and the Standard Provisions (Attachment No. 3).
2. This Order expires September 13, 2005. If the discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the discharger must apply for and obtain new waste discharge requirements. The discharger must submit a full and complete Report of Waste Discharge in accordance with Title 23 of the California Code of Regulations, to the Executive Officer, not later than 180 days in advance of the expiration date of this Order, as application for issuance of new waste discharge requirements. Not less than 180 days prior to any material change in the character, location, volume, or amount of waste discharge, the Discharger shall submit a technical report describing such changes. Such changes include but are 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,

13264, 23 CCR 2210];

- f. Any substantial change in the amount or characteristics of pollutants used, handled, stored, or generated;
 - g. Any new discharge of pollutants or new potential pollutant source; and/or
 - h. Other circumstances which could result in a material change in the character, amount, or location of discharges. [CWC 13372, 13264,23 CCR 2210]
- 3. All applications, reports, or information submitted to the Executive Officer of this Regional Board shall be signed and certified.
 - a. All Reports of Waste Discharge shall be signed by either a principal executive officer or ranking elected official.
 - b. All reports required by this Order and other information requested by the Executive Officer shall be signed by a person described in paragraph a. of this reporting requirement, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - (1) The authorization is made in writing by a person described in paragraph a. of this reporting requirement;
 - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
 - (3) The written authorization is submitted to the Executive Officer.
 - c. If an authorization under paragraph b. of this reporting requirement is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph b. of this reporting requirement must be submitted to the Executive Officer prior to or together with any reports, information, or applications to be signed by an authorized representative.
 - d. Any person signing a document under paragraph a. or b. of this reporting requirement shall make the following certification:

“I certify under penalty of law that this document and all attachments were

prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

4. Pursuant to State Board Order No. WQ 84-7, the discharger shall submit with its Report of Waste Discharge for reissuance of its NPDES permit, sufficient information to justify why any effluent proposed to be discharged to the ocean is not being reclaimed for beneficial use.
5. The discharger shall report sewer overflow events in accordance with the following procedures:
 - a. A sewer overflow event is a discharge of treated or untreated wastewater at a location not authorized by waste discharge requirements and/or a NPDES permit, which results from a pump station failure, sewer line break, obstruction, surcharge, or any other operational dysfunction. Overflows that occur within the treatment plant facility shall be reported to the Regional Board, the Office of Emergency Services (OES), and the County of San Diego Department of Environmental Health, following the procedures listed below. All sewer overflows within the collection system service area of the treatment facility shall be reported as specified in this Regional Board’s Order No. 96-04, General Waste Discharge Requirements Prohibiting Sanitary Sewer Overflows by Sewage Collection Agencies. The sewage overflow reporting requirements in this order coincide with the reporting requirements contained in Order No. 96-04.
 - b. For the purpose of this permit, discharges to storm drains are considered discharges to surface waters.
 - c. The following are the reporting procedures for sewage overflows from sewage treatment and disposal facilities:
 - (1) If a sanitary sewer overflow event results in a discharge that is greater than 1,000 gallons or that reaches surface waters, the discharger shall:
 - (a) Report the sanitary sewer overflow event to the Regional Board, OES, and the County of San Diego Department of Environmental Health by telephone, by voice mail, or by FAX within 24 hours from the time the discharger becomes aware of the sewer overflow event. This report shall include only the information specified by Item Nos. 1 through 5, 8, 12A, 12B, and 13 contained in the Sewer Overflow Report (SOR) form supplied by the Regional Board.

- (b) A SOR form, as well as any additional pertinent information, shall be submitted to the Regional Board no later than five days following the starting date of the sewer overflow event.
 - (c) The discharge event shall be included in the next quarterly self-monitoring report, in accordance with the format described in Order No. 96-04.
 - (2) If the sanitary sewer overflow event results in a discharge under 1,000 gallons or the discharge does not reach surface waters:
 - (a) A report is not required within 24 hours.
 - (b) The discharge event shall be included in the next quarterly self-monitoring report, in accordance with the format described in Order No. 96-04.
- 6. The discharger shall provide adequate notice to the Executive Officer of the following:
 - a. Any new introduction of pollutants into the discharger's treatment works from an indirect discharger which would be subject to Section 301 or 306 of the CWA if it were directly discharging those pollutants;
 - b. Any substantial change in the volume or character of pollutants being introduced into the discharger's treatment works by a source introducing pollutants into the treatment works at the time of issuance of this Order; and
 - c. For purposes of this paragraph, adequate notice shall include information on:
 - (1) The quality and quantity of effluent introduced into the POTW, and
 - (2) Any anticipated impact of the change on the quantity or quality of effluent and/or sludge to be discharged from the POTW.
- 7. The discharger shall give notice to the Executive Officer as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
 - a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b);
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are not subject to effluent limitations in this Order; or

- c. The alteration or addition results in a significant change in the discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of conditions in this Order that are different from or absent in the existing Order, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- 8. The discharger shall give advance notice to the Executive Officer of any planned changes in the permitted facility or activity which may result in noncompliance with the requirements of this Order.
- 9. This Order is not transferable to any person except after notice to the Executive Officer. The Executive Officer may require modification or revocation and reissuance of **this** Order to change the name of the discharger and incorporate such other requirements as may be necessary under the CWA or the California Water Code in accordance with the following:
 - a. Transfers by Modification

Except as provided in paragraph b. of this reporting requirement, this Order may be transferred by the discharger to a new owner or operator only if this Order has been modified or revoked and reissued, or a minor modification made to identify the new discharger and incorporate such other requirements as may be necessary under the CWA or California Water Code.
 - b. Automatic Transfers

As an alternative to transfers under paragraph a. of this reporting requirement, any NPDES permit may be automatically transferred to a new discharger if:

 - (1) The current discharger notifies the Executive Officer at least 30 days in advance of the proposed transfer date in paragraph b.(2) of this reporting requirement;
 - (2) The notice includes a written agreement between the existing and new dischargers containing a specific date for transfer of permit responsibility, coverage, and liability between them; and
 - (3) The Executive Officer does not notify the existing discharger and the proposed new discharger of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under 40 CFR Part 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph b.(2) of this reporting requirement.

10. The discharger shall conduct monitoring and submit reports in accordance with Monitoring and Reporting Program (MRP) No. 2000-129. Monitoring results shall be reported at the intervals specified in MRP No. 2000-129.
11. The discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the discharger becomes aware of the circumstances. A written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer or an authorized representative may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following shall be included as information which must be reported within 24 hours under this reporting requirement:
 - a. Any unanticipated bypass which exceeds any effluent limitation in this Order;
 - b. Any upset which exceeds any effluent limitation in this Order;
 - c. Violation of a daily maximum effluent limitation as specified in this Order for the following pollutants:
 - (1) Chronic Toxicity
 - (2) Arsenic
 - (3) Cadmium
 - (4) Chromium (Hexavalent)
 - (5) Copper
 - (6) Lead
 - (7) Mercury
 - (8) Nickel
 - (9) Selenium
 - (10) Silver
 - (11) Zinc
 - (12) Cyanide
 - (13) Total Chlorine Residual
 - (14) Ammonia
 - (15) Phenolic Compounds (non-chlorinated)
 - (16) Chlorinated Phenolics
 - (17) Endosulfan
 - (18) Endrin
 - (19) H C H
 - d. Any violation of effluent limitations for acute toxicity as specified in this Order;

- e. Any violation of the prohibitions of this Order; and
 - f. Any finding of levels of bacteria in a receiving water sample which exceeds bacterial water quality objectives specified in Receiving Water Limitation C. 1 .a.(1) of this Order.
- 12. The discharger shall furnish to the Executive Officer, SWRCB Executive Director, or USEPA, within a reasonable time, any information which the Executive Officer, SWRCB Executive Director, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order, or to determine compliance with this Order. The discharger shall also furnish to the Executive Officer, SWRCB Executive Director, or USEPA, upon request, copies of records required to be kept by this Order.
 - 13. The discharger shall report all instances of noncompliance not reported under Reporting Requirements G. 10, G. 11, and G. 16 of this Order, at the time monitoring reports are submitted. The reports shall contain the information listed in Reporting Requirement G.11 of this Order.
 - 14. Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge, or submitted incorrect information in a Report of Waste Discharge, or in any report to the Regional Board, it shall promptly submit such facts or information.
 - 15. Whenever a receiving water sample is found to contain levels of bacteria which exceed bacterial water quality objectives specified in Receiving Water Limitation C.1.a.(1) of this Order, the discharger shall immediately notify the County of San Diego Department of Environmental Health and post signs prohibiting body contact with the water in all areas affected by the contamination.
 - 16. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
 - 17. 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 the 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; and

- 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 to control the flowrate before the waste flowrate equals the capacity of the POTW's present unit operations and processes.
18. Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the offices of the California Regional Water Quality Control Board, San Diego Region. As required by the CWA, Reports of Waste Discharge, this Order, and effluent data shall not be considered confidential.
19. The discharger shall submit reports and provide notifications to the Regional Board and other agencies as specified in this Order. These other agencies include USEPA and the San Diego County Department of Environmental Health. Reports shall be submitted and notifications shall be made to:
- a. Executive Officer
California Regional Water Quality Control Board
San Diego Region
9771 Clairemont Mesa Boulevard, Suite A
San Diego, California 92124-1324
Phone - (858) 467-2952
Fax - (858) 571-6972
 - b. Regional Administrator
U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, California 94105
 - c. Department of Environmental Health
County of San Diego
P.O. Box 129261
San Diego, California 92112-9261
Phone - (619) 338-2222 [Monday-Friday, 7:30 AM to 4:30 PM]
After Hours - (858) 565-5255 [County Communications Dispatch, request
dispatcher to page the Hazardous Materials
Specialist]
Fax - (619) 338-2848
 - d. Office of Emergency Services (OES)
Phone - (916) 262-1621 or 1- (800) 852-7550
Fax - (916) 262-1677

September 13, 2000

- e. Regulation Unit
Division of Water Quality
State Water Resources Control Board
P.O. Box 944213
Sacramento, CA 942442130


H. NOTIFICATIONS

1. California Water Code Section 13263(g) states:

No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. *All discharges of waste into waters of the state are privileges, not rights.*

2. The discharger is held accountable for responsibilities, liabilities, legal actions, and penalties as stated in Attachment No. 3 and Attachment No. 4 of this Order.
3. This Order shall become effective 10 days after the date of its adoption provided the Regional Administrator, USEPA, has no objection. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

I, John H. Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of Order No. 2000-129 adopted by the California Regional Water Quality Control Board, San Diego Region, on September 13, 2000.



JOHN H. ROBERTUS
Executive Officer

ORDER NO. 2000-129 ENDNOTES

- 1 Secondary treatment is defined by the USEPA Administrator in the federal regulations (40 CFR Part 133.100 to 40 CFR Part 133.105) in terms of three parameters: **5-day** biochemical oxygen demand (**BOD₅**), total suspended solids (TSS), and **pH**. Federal regulations allow substitution of 5-day carbonaceous biochemical oxygen demand (**CBOD₅**) limitations for **BOD₅** limitations.
- 2 Effluent concentration limitations are specified in the 1997 Ocean Plan, Table A. For consistency with antidegradation policies, mass emission rate (MER) limitations, where applicable, were determined using procedures outlined in the 1997 Ocean Plan, Equation 2, and a **flowrate** of 15 **MGallons/Day**.
- 3 Effluent limitations were determined using the procedures outlined in the 1997 Ocean Plan, and an initial dilution of 100. Mass emission rate (MER) limitations were determined using procedures outlined in the 1997 Ocean Plan, Equation 2, and a **flowrate** of 15 **MGallons/Day**.
- 4 The discharger may, at its option, meet this limitation as a total chromium limitation.
- 5 If the 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 Standard Methods 412 F, G, and H (Standard Methods for the Examination of Water and Wastewater, Joint Editorial Board, American Public Health Association, American Water Works Association, and Water Pollution Control Federation, most recent edition).
- 6 The effluent concentration and mass emission rate limitations for total chlorine residual are based on a continuous discharge of chlorine. Effluent **concentration** limitations for total chlorine residual, which are applicable to intermittent discharges not exceeding 2 hours, shall be determined through the use of the following equations:
- $$\log co = -0.43 (\log x) + 1.8$$
- $$Ce = Co + Dm (Co - Cs)$$
- where:
- Co = the concentration (in **ug/L**) to be met at the completion of initial dilution
- x = the duration of uninterrupted chlorine discharge in minutes
- Ce = the effluent concentration limitation (in **ug/L**) to apply when chlorine is being intermittently discharged
- Dm = the minimum probable initial dilution
- Cs = the background seawater concentration = 0
- 7 Endosulfan shall mean the sum of endosulfan-alpha and -beta and endosulfan sulfate.
- 8 HCH shall mean the sum of the alpha, beta, gamma (lindane) and delta isomers of hexachlorocyclohexane.
- 9 The 1997 Ocean Plan refers to limits specified in Title 17, Division 5, Chapter 4, Group 3, Article 3, Section 32069 of the California Code of Regulations. The referenced section has since been repealed and the limitations set forth in this Order will be substituted. According to SWRCB staff, the change will be reflected in subsequent Ocean Plan revisions.

- ¹⁰ Dichlorobenzenes shall mean the sum of 1,2- and 1,3-dichlorobenzene.
- ¹¹ Chlordane shall mean the sum of chlordane-alpha, chlordane-gamma, **chlordene-alpha**, **chlordene-gamma**, nonachlor-alpha, nonachlor-gamma, and oxychlordane.
- ¹² 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**.
- ¹³ Halomethanes shall mean the sum of bromoform, bromomethane (methyl bromide), chloromethane (methyl chloride), chlorodibromomethane, and dichlorobromomethane.
- ¹⁴ Heptachlor shall mean the sum of heptachlor and heptachlor epoxide.
- ¹⁵ **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.
- ¹⁶ **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.
- ¹⁷ **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.

<u>Isomer Group</u>	<u>Toxicity Equivalence Factor</u>
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

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

**MONITORING AND REPORTING PROGRAM NO. 2000-129
NPDES PERMIT NO. CA0109045
FOR THE
CITY OF SAN DIEGO
SOUTH BAY WATER RECLAMATION PLANT**

**DISCHARGE TO THE PACIFIC OCEAN
THROUGH THE SOUTH BAY OCEAN OUTFALL

SAN DIEGO COUNTY**

This Monitoring and Reporting Program shall become effective with the adoption of Order No. 2000-129.

I. Purpose

This monitoring program is intended to:

- Document short-term and long-term effects of the discharge on receiving waters, sediments, biota, and beneficial uses of the receiving water.
- Determine compliance with NPDES permit terms and conditions.
- Assess the performance of the industrial pretreatment and toxic control programs.

The monitoring data will be used to determine compliance with water quality standards.

Receiving water monitoring will be a shared monitoring program with the International Wastewater Treatment Plant (IWTP).

II. Monitoring Provisions

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this monitoring program and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Executive Officer. Samples shall be collected at times representative of "worst-case" conditions with respect to compliance with the requirements of Order No. 2000-129.

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 ± 10 % 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 (40 CFR 136), Guidelines Establishing Test Procedures for the Analysis of Pollutants, as amended, unless otherwise specified for sludge in 40 CFR 503, or unless other test procedures have been specified in Order No. 2000-129 and/or in this monitoring and reporting program.
4. If the discharger monitors any pollutants more frequently than required by Order No. 2000-129 or by this monitoring and reporting program, using test procedures approved under 40 CFR Part 136 or as specified in Order No. 2000-129 and this monitoring and reporting program, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharger's monitoring report. The increased frequency of monitoring shall also be reported.
5. 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 Order No. 2000-129 and this monitoring and reporting program, and records of all data used to complete the application for Order No. 2000-129. 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 Regional Board Executive Officer or the USEPA.
6. Records of monitoring information shall include:
 - a. The date, exact location, and time of sampling or measurements;
 - b. The name(s) of individual(s) who performed the sampling or measurements;
 - c. The date(s) analyses were performed;
 - d. The name(s) of the laboratory and individual(s) who performed the analyses;
 - e. The analytical techniques or methods used; and
 - f. The results of such analyses.
7. Calculations for all limitations that require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in Order 2000-129 or this monitoring and reporting program.

8. 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.
9. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Environmental Health or in a laboratory approved by the Regional Board Executive Officer.
10. The discharger shall have and implement an acceptable written quality assurance (QA) plan for laboratory analyses. An annual report shall be submitted by February 1st of each year that 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 more frequent. A similar frequency shall be maintained for analyzing spiked samples. When requested by the USEPA or the Regional Board, the discharger will participate in the NPDES discharge monitoring report QA performance study. The discharger shall have a success rate equal to or greater than 80 percent.
11. The discharger shall report all instances of noncompliance not reported under Reporting Requirement G.11 of Order No. 2000-129 at the time monitoring reports are submitted. The reports shall contain the information listed in Reporting Requirement G. 11 of Order No. 2000-129.
12. By February 1st of each year, the discharger shall submit an annual report to the Regional Board and USEPA Region 9 that 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. 2000-129 and this monitoring and reporting program.
13. Laboratory method detection limits (MDLs) and practical quantitation levels (PQLs) shall be identified for each constituent in the matrix being analyzed with all reported analytical data. Acceptance of data shall be based on demonstrated laboratory performance.
14. Monitoring results shall be reported at intervals and in a manner specified in Order No. 2000-129 and in this monitoring and reporting program. Monitoring reports shall be submitted to the Regional Board and to USEPA Region 9 according to the following schedule:

<u>Monitoring Frequency</u>	<u>Reporting Period</u>	<u>Report Due</u>
Continuous, Daily, Weekly, or Monthly	All	By the first day of the second month after the month of sampling.

<u>Monitoring Frequency</u>	<u>Renortina Period</u>	<u>Report Due</u>
Quarterly	Jan.-March	May 1
	April-June	August 1
	July-September	November 1
	October-December	February 1
Semiannually	January-June	August 1
	July-December	February 1
Annually	January-December	February 1
Once every 5 years	---	February 1

III. Influent Monitoring

Influent monitoring is intended to:

- Determine compliance with NPDES permit conditions and water quality standards.
- Assess treatment plant performance.
- Assess the performance of the Industrial Pretreatment Program and the Toxic Control Program.

Sampling stations shall be established at each point of inflow to the treatment plant and shall be located upstream of any in-plant return flows where representative samples of the **influent** can be obtained. **Influent** samples shall be collected on the same day as effluent samples, and shortly before the collection of effluent samples.

During periods when no effluent from treatment plant is discharged to the Pacific Ocean, no **influent** monitoring, except for flowrate monitoring, is required.

The following shall constitute the **influent** monitoring program:

<u>Parameter</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Minimum Frequency</u>
Flowrate	MGallons/Day	recorder/ totalizer	continuous
BOD ₅ @ 20°C	mg/l	24-hour composite	weekly
Suspended Solids	mg/l	24-hour composite	weekly
Arsenic	mg/l	24-hour composite	monthly
Cadmium	mg/l	24-hour composite	monthly
Copper	mg/l	24-hour composite	monthly
Chromium(VI)	mg/l	24-hour composite	monthly
Cyanide	mg/l	24-hour composite	monthly
Lead	mg/l	24-hour composite	monthly

Mercury	mg/l	24-hour composite	monthly
Nickel	mg/l	24-hour composite	monthly
Silver	ug/l	24-hour composite	monthly
Zinc	mg/l	24-hour composite	monthly

IV. Effluent Monitoring

Effluent monitoring is intended to:

- Determine compliance with NPDES permit conditions and water quality standards.
- Identify operational problems in order to improve plant performance.
- Provide information on waste characteristics and flows for use in interpreting water quality and biological data.

The effluent sampling station shall be located downstream of any in-plant return flows and disinfection units, where representative samples of the effluent discharged through the ocean outfall can be obtained.

During periods where no effluent from the treatment plant is discharged to the Pacific Ocean, no effluent monitoring, except for flowrate monitoring, is required.

The following shall constitute the effluent monitoring program:

<u>Parameter</u>	<u>Unit</u>	<u>Type of Sample</u>	<u>Minimum Frequency (2)</u>
Flowrate	MGallons/Day	recorder/totalizer	continuous
BOD ₅ @ 20°C	mg/L	24-hour composite	daily (1)
Suspended Solids	mg/L	24-hour composite	daily (1)
pH	pH units	grab	daily (1)
Oil and Grease	mg/L	grab	weekly
Settleable Solids	mL/L	grab	weekly
Turbidity	NTU	24-hour composite	weekly
Acute Toxicity	TUa	24-hour composite	weekly
Dissolved Oxygen	mg/L	grab	weekly
Temperature	°C	-----	weekly
Arsenic	mg/L	24-hour composite	monthly
Cadmium	mg/L	24-hour composite	monthly
Chromium(W)	mg/l	24-hour composite	monthly
Copper	mg/L	24-hour composite	monthly
Lead	mg/L	24-hour composite	monthly

Parameter	Unit	Type of Sample	Minimum Frequency(2)
Mercury	ug/L	24-hour composite	monthly
Nickel	mg/L	24-hour composite	monthly
Selenium	mg/L	24-hour composite	monthly
Silver	ug/L	24-hour composite	monthly
Zinc	mg/L	24-hour composite	monthly
Cyanide	mg/L	24-hour composite	monthly
Total Residual Cl	mg/L	grab	weekly (3)
Ammonia (as N)	mg/L	24-hour composite	monthly
Chronic Toxicity	TUc	24-hour composite	monthly (4)
Phenolic Compounds (non-chlorinated)	mg/L	24-hour composite	monthly
Phenolic Compounds (chlorinated)	mg/L	24-hour composite	monthly
Endosulfan	ug/L	24-hour composite	monthly
Endrin	ug/L	24-hour composite	monthly
H C H	ug/L	24-hour composite	monthly
Radioactivity	pCi/L	24-hour composite	monthly
Acrolein	mg/L	grab	quarterly
Antimony	mg/L	24-hour composite	quarterly
bis(2-chloroethoxy) methane	ug/L	grab	quarterly
bis(2-chloroisopropyl) ether	mg/L	grab	quarterly
chlorobenzene	mg/L	grab	quarterly
chromium (III)	g/L	24-hour composite	quarterly
di-n-butyl phthalate	mg/L	grab	quarterly
dichlorobenzenes	g/L	grab	quarterly
1,1-dichloroethylene	g/L	grab	quarterly
diethyl phthalate	g/L	grab	quarterly
dimethyl phthalate	g/L	grab	quarterly
4,6-dinitro-2- methylphenol	mg/L	grab	quarterly
2,4 dinitrophenol	ug/L	grab	quarterly
ethylbenzene	mg/L	grab	quarterly
fluoranthene	mg/L	grab	quarterly
hexachlorocyclo pentadiene	mg/L	grab	quarterly

isophorone	g/L	grab	quarterly
nitrobenzene	ug/L	grab	quarterly
thallium	mg/L	24-hour composite	quarterly
toluene	g/L	grab	quarterly
1,1,2,2-tetrachloro-ethane	mg/L	grab	quarterly
tributyltin	ug/L	24-hour composite	quarterly
1,1,1-trichloroethane	g/L	grab	quarterly
1,1,2-trichloroethane	g/L	grab	quarterly
acrylonitrile	ug/L	grab	quarterly
aldrin	ng/L	grab	quarterly
benzene	mg/L	grab	quarterly
benzidine	ng/L	grab	quarterly
beryllium	ug/L	24-hour composite	quarterly
bis(2-chloroethyl) ether	ug/L	grab	quarterly
bis(2-ethylhexyl) phthalate	ug/L	grab	quarterly
carbon tetrachloride	ug/L	grab	quarterly
chlordane	ng/L	grab	quarterly
chloroform	mg/L	grab	quarterly
DDT	ng/L	grab	quarterly
1,4-dichlorobenzene	mg/L	grab	quarterly
3,3-dichlorobenzidine	ug/L	grab	quarterly
1,2-dichloroethane	mg/L	grab	quarterly
dichloromethane	mg/L	grab	quarterly
1,3-dichloropropene	mg/L	grab	quarterly
dieldrin	ng/L	grab	quarterly
2,4-dinitrotoluene	ug/L	grab	quarterly
1,2-diphenylhydrazine	ug/L	grab	quarterly
halomethanes	mg/L	grab	quarterly
heptachlor	ng/L	grab	quarterly
hexachlorobenzene	ng/L	grab	quarterly
hexachlorobutadiene	mg/L	grab	quarterly
hexachloroethane	ug/L	grab	quarterly
N-nitrosodimethylamine	mg/L	grab	quarterly
N-nitrosodiphenylamine	ug/L	grab	quarterly

PAHs	ug/L	grab	quarterly
PCBs	ng/L	grab	quarterly
TCDD equivalents ^a	pg/L	grab	quarterly (5)
Tetrachloroethylene	mg/L	grab	quarterly
Toxaphene	ng/L	grab	quarterly
Trichloroethylene	mg/L	grab	quarterly
2,4,6-trichlorophenol	ug/L	grab	quarterly
vinyl chloride	mg/L	grab	quarterly

V. Land Outfall Monitoring

The combined effluent from the International Wastewater Treatment Plant (IWTP) and the SBWRP shall be monitored quarterly. The monitoring shall take place downstream of the confluence of the two effluent discharges and outside of the mixing zone. The monitored parameters shall be the same as for the effluent monitoring program. The effluent limitations listed in Section B.1 of Order No. 2000-129 will not apply to the combined effluent.

VI. Receiving Water Monitoring

To determine compliance with water quality standards, the receiving water quality monitoring program must document conditions in the vicinity of the "Zone of Initial Dilution" (ZID) boundary, at reference stations, and at areas beyond the ZID where discharge impacts might reasonably be expected. Monitoring must reflect conditions during all critical environmental periods. Receiving water monitoring shall be conducted as specified below.

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.

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

1. Sampling Stations

- Offshore Stations: Offshore water quality and benthic stations shall be located and numbered as follows:

<u>Stations</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Depth(ft)</u>
11	32 28.400	117 16.600	197
12	32 28.400	117 11.930	107
13	32 28.020	117 10.050	88
14	32 28.300	117 08.410	60
15	32 28.300	117 07.780	45
16	32 29.610	117 09.800	87
17	32 31.000	117.15.200	170
18	32 31.000	117 12.120	118
19	32 30.700	117 10.720	95
I 10	32 31.000	117 09.330	63
I 11	32 30.800	117 08.200	44
I 12	32 31.970	117 11.000	93
I 13	32 32.250	117 12.720	124
I 14	32 32.580	117 11.020	91
I 15	32 32.270	117 11.350	102
I 16	32 32.270	117 11.000	92
I 17	32 32.270	117 10.680	84
I 18	32 32.170	117 09.670	63
I 19	32 32.180	117 07.730	33
120	32 33.420	117 15.420	183
121	32 33.640	117 13.610	135
I 22	32 33.200	117 11.080	93
I 23	32 33.050	117 09.900	68
124	32 33.400	117 08.730	35
I 25	32 33.670	117 08.870	31
I 26	32 34.470	117 08.800	31
I 27	32 34.450	117 11.450	92
128	32 35.630	117 15.870	183
129	32 35.670	117 13.380	124
I 30	32 35.720	117 11.830	92
131	32 35.730	117 10.330	63
I 32	32 35.680	117 08.270	33
I 33	32 37.440	117 14.230	98
I 34	32 37.800	117 12.930	62
I 35	32 38.200	117 10.920	63
I 36	32 38.350	117 09.220	37
I 37	32 38.880	117 12.980	41

138	32 40.130	117 11.200	37
139	32 34.340	117 10.050	60
140	32 33.230	117 08.170	32

b) Trawl Stations: Trawl Stations shall be located and numbered as follows:

<u>Stations</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Depth</u>
SD-15	32 28.350	117 10.500	90
SD-16	32 31.000	117 10.720	90
SD-17	32 32.200	117 11.430	100
SD-18	32 32.580	117 11.350	100
SD-19	32 33.500	117 11.080	94
SD-20	32 34.680	117 11.450	96
SD-21	32 36.990	117 12.690	95

c) Rig Fishing Stations: Rig fishing stations shall be located and numbered as follows:

<u>Stations</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Depth</u>
RF-1	32 28.350	117 10.100	90
RF-2	32 32.270	117 11.000	90

d) Shore Station Locations: Shore station locations shall be located and numbered as follows:

<u>Stations</u>	<u>Location</u>	<u>Description</u>
S-1	Mexico(Punta Bandera)	Beach at Punta Bandera near the middle of the Point.
s-2	Mexico(El Vigia)	Beach south of El Vigia Restaurant
s-3	Mexico(Fraccionamiento Playes de Tijuana)	Beach at end of existing road of Playes de Tijuana
s-4	United States (Border Area)	Beach just north of the border fence
s-5	United States (Tijuana Estuary)	Beach north of mouth of estuary
S-6	United States (Imperial Beach)	Beach at end of Seacoast Drive
S-S	United States (Silver Strand)	Silver Strand State Beach. Area 4

West of Coronado Cays

s-9	United States (Coronado)	Beach at end of Avenida Del Sol seaward of Hotel Del Coronado
s-10	United States (Monument Rd)	Beach at the terminus of Monument Road
s-11	United States (North of Tijuana River)	Beach approximately $\frac{3}{4}$ mile north of the mouth of the Tijuana River
s-12	United States (Imperial Beach)	Beach at the end of Carnation Street

It is recommended that the off-shore stations be located using a land-based microwave positioning system, such as Mini-Ranger or trisponder, or a satellite positioning system such as Global Positioning System (GPS). The high levels of accuracy and precision afforded by this type of positioning system will ensure that stations are properly located with respect to the ZID. If an alternate navigation system (e.g. Loran C) is proposed, its accuracy should be compared to that of the systems recommended herein, and any compromises in accuracy should be justified.

Monitoring station locations may be modified with the approval of the Executive Officer.

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	None	All Stations	Visual	monthly	monthly
Total and Fecal Coliforms; Enterococcus	CFU/100ml	S-1 to S-9,13,15, 17 to I14,I16, I18 to I24,I30, I32, I33, 136 to 138,140	grab	weekly/monthly	monthly
Total and Fecal Coliforms; Enterococcus	CFU/100 ml	I25, I26, I39	grab	5 times per month (rotate sample day each week so that each day of week is represented in a 2 month period)	monthly
temperature	Degree C	11 to 140	profile	monthly	monthly

pH	units	11 to 140	profile	monthly	monthly
salinity	ppt	11 to 140	profile	monthly	monthly
dissolved oxygen	mg/l	11 to 140	profile	monthly	monthly
transmissivity	---	11 to 140	profile	monthly	monthly
oil and grease	mg/l	I3, I5, I7 to 114, 116,118 to 126, I30, I32, I33, 136 to 140.	grab	monthly	monthly
total suspended solids	mg/l	I3, I5, I7 to 114, 116,118 to 126, I30, I32, I33, 136 to 140	grab	monthly	monthly
kelp	----	-----	aerial photos	annually	annually

- a. Visual observations of the surface water conditions at the designated receiving water stations shall be conducted in such a manner as to enable the observer to describe and report the presence, if any, of floatables of sewage origin. Observations of wind (direction and speed), weather (cloudy, sunny, or rainy), direction of current, tidal conditions (high or low), water color, oil and grease, turbidity, and odor shall be recorded. These observations shall be taken whenever a sample is collected. Observations at shoreline stations will occur on a more frequent basis (weekly or every 2 weeks) corresponding with the increased frequency of shoreline bacterial monitoring during certain times of the year (see c. below)
- b. Total suspended solids shall be measured monthly at three depths (sub-surface, mid-depth, and bottom). Oil and grease shall be measured monthly in the top five feet of surface water. Temperature, salinity dissolved oxygen, light transmittance and pH shall be measured monthly throughout the entire water column using probes (XBTs, CTDs) or meters (DO, pH). Suspended solids, and light transmittance measurements shall be taken on the same day and as close together in time as possible.
- c. Total and fecal coliform and enterococcus shall be sampled at nine shore stations (S-1 to S-9) according to the following schedule: weekly from May 1 through October 31, and every two weeks from November 1 through April 30.

Total and fecal coliform and enterococcus shall be sampled at three kelp bed stations (125, 126, and 139) 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 (sub-surface, mid-depth, and bottom).

Total and fecal coliform and enterococcus shall be sampled at least monthly at 25 offshore

stations from three depths (sub-surface, mid-depth, and bottom).

- d. The areal extent of the Point Loma and Imperial Beach kelp beds shall be determined by aerial photography. The discharger shall participate with other ocean dischargers in the San Diego Region in an annual 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 Regional Board's coastal kelp beds. Surveys shall be conducted as close as possible to the time when kelp bed canopies cover the greatest area. The images produced by the surveys shall be presented in the form of a 1:24,000 scale photo-mosaic of the entire Regional Board coastline. Onshore reference points, locations of all ocean outfalls and diffusers, and the 30-foot Mean Low Low Water (MLLW) and 60-foot(MLLW) depth contours shall be shown. The areal extent of the Imperial Beach kelp beds photographed in each survey shall be compared to that noted in previous years surveys. Any significant losses which persist for more than one year shall be investigated by divers to determine the probable cause for the loss.

3. Benthic Monitoring Requirements

- a. Sediment Sampling and Analyses Requirements: Sediment samples shall be collected from 27 stations (11 to I4, I6 to I10, I12 to I16, I18, I20 to I23, I27 to I31, I33 to I35) using a 0.1 square meter modified Van Veen grab sampler. Sediment samples for chemical analyses shall be taken from the top 2 centimeters of the grab. The samples shall be analyzed for the set of constituents listed below. Sediment chemistry ambient monitoring may be conducted using USEPA approved methods, or methods developed by NOAA's National Status and Trends for Marine Environmental Quality. For chemical analysis of sediment, samples shall be reported on a dry weight basis.

<u>Parameter</u>	<u>Units</u>	<u>Sample</u>	<u>Frequency</u>
Sediment grain size	phi	grab	semiannually
Total Organic Carbon	%	grab	semiannually
Total Nitrogen	%	grab	semiannually
Acid Volatile Sulfides	mg/kg	grab	semiannually
<i>Metals</i>			
Aluminum	mg/kg	grab	semiannually
Antimony	mg/kg	grab	semiannually
Arsenic	mg/kg	grab	semiannually
Cadmium	mg/kg	grab	semiannually
Chromium	mg/kg	grab	semiannually
Copper	mg/kg	grab	semiannually
Iron	mg/kg	grab	semiannually
Lead	mg/kg	grab	semiannually
Manganese	mg/kg	grab	semiannually
Mercury	mg/kg	grab	semiannually

Nickel	mg/kg	grab	semiannually
Selenium	mg/kg	grab	semiannually
Silver	mg/kg	grab	semiannually
Tin	mg/kg	grab	semiannually
Zinc	mg/kg	grab	semiannually

PCB's and Chlorinated Pesticides

PCBs	ng/kg	grab	semiannually
2,4-DDD	ng/kg	grab	semiannually
4,4-DDD	ng/kg	grab	semiannually
2,4-DDE	ng/kg	grab	semiannually
4,4-DDE	ng/kg	grab	semiannually
2,4-DDT	ng/kg	grab	semiannually
4,4-DDT	ng/kg	grab	semiannually
Aldrin	ng/kg	grab	semiannually
Alpha-Chlordane	ng/kg	grab	semiannually
Dieldrin	ng/kg	grab	semiannually
Endosulfan	ng/kg	grab	semiannually
Endrin	ng/kg	grab	semiannually
Gamma-BHC	ng/kg	grab	semiannually
Heptachlor	ng/kg	grab	semiannually
Heptachlor Epoxide	ng/kg	grab	semiannually
Hexachlorobenzene	ng/kg	g r a b	semiannually
Mirex	ng/kg	grab	semiannually
Trans-Nonachlor	ng/kg	grab	semiannually

Polycyclic Aromatic Hydrocarbons

Acenaphthene	ug/kg	grab	semiannually
Acenaphthylene	ug/kg	grab	semiannually
Anthracene	ug/kg	grab	semiannually
Benzo(a)anthracene	ug/kg	grab	semiannually
Benzo(o)fluoranthene	ug/kg	grab	semiannually
Benzo(k)fluoranthene	ug/kg	grab	semiannually
Benzo(ghi)pyrene	ug/kg	grab	semiannually
Benzo(a)pyrene	ug/kg	grab	semiannually
Benzo(e)pyrene	ug/kg	grab	semiannually
Biphenyl	ug/kg	grab	semiannually
Chrysene	ug/kg	grab	semiannually
Dibenz(ah)anthracene	ug/kg	grab	semiannually
Fluoranthene	ug/kg	grab	semiannually
Fluorene	ug/kg	grab	semiannually
Ideno(123cd)pyrene	ug/kg	grab	semiannually
Naphthalene	ug/kg	grab	semiannually
1 -methylnaphthalene	ug/kg	grab	semiannually
2-Methylnaphthalene	ug/kg	grab	semiannually
2,6-Dimethylnaphthalene	ug/kg	grab	semiannually

2,3,5-Trimethylnaphthale	ug/kg	grab	semiannually
Perylene	ug/kg	grab	semiannually
Phenanthrene	ug/kg	grab	semiannually
1-Methylphenantbene	ug/kg	grab	semiannually
Pyrene	ug/kg	grab	semiannually

- b. **Infauna Monitoring:** For analyses of benthic infauna, two replicate samples of bottom sediments shall be collected and analyzed semiannually from the following 27 stations: (11 to I4, I6 to 110, 112 to I16, I18, I20 to 123, 127 to 131, 133 to 135).

The benthic infaunal samples shall be collected using a 0.1 sq. meter modified Van Veen grab sampler. These grab samples 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 15 percent buffered formalin, and transferred to 70 percent alcohol within two to seven days of storage. These organisms may be stained using Rose Bengal to facilitate sorting. All organisms, including infaunal organisms, obtained during benthic monitoring shall be counted and identified to as low a taxon as possible. Biomass shall be estimated from wet weight measurements for each of the following taxa: molluscs, echinoderms, polychaetes, crustaceans, and other macroinvertebrates.

The semiannual reports shall consist of the raw data (number of individuals per species) along with an analysis of community parameters per station as follows:

- 1) Number of species per 0.1 sq. meter
- 2) Total number of species per station
- 3) Total numerical abundance
- 4) Biomass
- 5) Infaunal trophic index
- 6) Swartz's 75% dominance index
- 7) Shannon-Weiner's diversity index (H)
- 8) Pielou evenness (J)

In addition, to the community parameters, the annual report shall include more detailed statistical comparisons including community, temporal, and spatial analyses. Methods may include, but are not limited to, various multivariate methods such as cluster analysis, ordination, and regression. Additional analyses shall also be conducted, as appropriate, to elucidate temporal and spatial trends in the data.

- c. **Random Sampling:** An additional array of 40 randomly selected stations shall be sampled and analyzed annually for sediment chemistry and benthic infauna following the procedures outlined in Benthic Monitoring Requirements 3.a and 3.b. The stations shall be reselected each year by USEPA using USEPA probability-based EMAP design. The area shall extend from the mouth of the San Diequito River south to the Mexican border. The results shall be included in the annual receiving water report.

4. Fish Monitoring Reports

- a. Fish Trawls: Fish trawls shall be conducted quarterly to assess the community structure of demersal fish and macroinvertebrates and the presence of priority pollutants in fish. Single trawls shall be conducted quarterly at seven trawl stations (SD-15 to SD-21) using a Marinovich 25 ft head rope otter trawl and following the guidance in the field manual developed for the Southern California Bight Pilot Project. The organisms captured at each trawl station shall be identified as to species.

For each of the seven stations, a community structure analysis shall be conducted. This will consist of the wet weight of each species, number of individuals per species, total numerical abundance, species richness and diversity (i.e. Shannon-Weiner), and multivariate pattern analyses (e.g., ordination and classification analyses). Abnormalities and disease systems shall be recorded and itemized, such as fin erosion, tumors, lesions, etc.


Chemical analyses of fish tissue shall be performed semiannually on selected target species at the seven trawl stations. The list of constituents shall be the same as for sediments with the exception that a measurement for total lipids will replace organic carbon, nitrogen, and grain size. The species targeted for analysis will be selected for their ecological or commercial importance. Three replicate composite samples shall be prepared from each trawl station for liver tissue and taken from at least three fish of the same species.

The species targeted for analysis shall be primarily flatfish including, but not limited to, the following: pacific sanddab (*Citharichthys sordidus*), longfin sandab (*Citharichthys xanhostigma*), speckled sanddab (*Citharichthys stigmaeus*), bigmouth sole (*Hippoglossina stomata*), and homyhead turbot (*Pleuronichthys verticalis*). The California scorpionfish (*Scorpaena guttata*) and the halfbanded rockfish (*Sebastes serinicinctus*) shall be targeted at trawl stations not having sufficient number of flatfish.

- b. Rig Fishing: Rig fishing shall be performed semiannually to monitor the uptake of pollutants in fish which are consumed by humans to determine the impact on public health, and to assess the impacts on local fish populations. The 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 ZLD. The fish shall be representative of those caught by recreational and commercial fisherman in the area. Fish samples shall be identified to species, with number of individuals per species, standard length and wet weight recorded. Physical abnormalities and disease symptoms shall be recorded and itemized (e.g., fin rot, lesions, and tumors).

Three replicate composite samples of the target species shall be obtained at each station. Each composite shall consist of a minimum of three individuals. Muscle tissue shall be chemically analysed for the same set of constituents as trawl-caught fish.

I, John H Robertus, Executive Officer of the San Diego Regional Water Quality Control Board, do hereby certify the foregoing is a full, true, and correct copy of Monitoring and Reporting Program No. 2000-129 adopted by the California Regional Water Quality Control Board, San Diego Region, on September 13, 2000.



John H. Robertus
Executive Officer

VII. Monitoring and Reporting Program No. 2000-129 Endnotes

1. Five days per week except seven days per week for at least one week in July or August of each year.
2. The minimum frequency of monitoring for this constituent shall be automatically increased to twice the minimum frequency specified here if any analysis for this constituent yields a result higher than the effluent limit specified in Order No. 2000-129 for this constituent. The increased minimum frequency of monitoring shall remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all effluent limits specified in Order No. 2000-129 for this constituent.
3. Monitoring of total chlorine residual is required only on those days when the treatment facility uses chlorine for disinfection. If only one sample is collected for total chlorine residual analysis on a particular day, that sample must be collected at the time when the concentration of total chlorine residual in the discharge would be expected to be greatest, The times of chlorine discharges on the days the samples are collected and the times at which samples are collected shall be reported.
4. A screening period for chronic toxicity shall be conducted every other year for a three month period using a minimum of three test species (one plant, one invertebrate, and one vertebrate) chosen from the list of approved chronic toxicity test protocols specified in the 1997 version of the Ocean Plan. After the screening period, the most sensitive species (i.e., the species exhibiting the lowest NOEL) shall be used for the monthly testing. Repeat screening periods may be terminated after the first month if the most sensitive species during the first month is the same as the species previously found to be most sensitive.

Results for chronic toxicity shall be submitted, electronically, in the TOXIS Version 2.4 database format. After one year, the data will be evaluated by Regional Board staff to determine if a reduction in the minimum monitoring frequency is appropriate. If the Executive Officer determines that a reduction in the minimum monitoring frequency is appropriate, the minimum monitoring frequency will be specified by the Executive Officer.

5. EPA method 8280 shall be used to analyze for TCDD equivalents.

