CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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REVISED TENTATIVE ORDER NO. R9-2017-0023 AMENDING ORDER NO. R9-2013-0006 AS AMENDED BY ORDER NO. R9-2014-0071, NPDES NO. CA0109045 WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF SAN DIEGO SOUTH BAY WATER RECLAMATION PLANT DISCHARGE TO THE PACIFIC OCEAN VIA THE SOUTH BAY OCEAN OUTFALL

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

Background

1. On February 13, 2013, the San Diego Water Board adopted Order No. R9-2013-0006, National Pollutant Discharge Elimination System (NPDES) No. CA0109045, establishing waste discharge requirements for the City of San Diego (Discharger or City) to discharge up to 15 million gallons per day (MGD) of secondary-treated effluent from the South Bay Water Reclamation Plant (SBWRP) into the Pacific Ocean through the South Bay Ocean Outfall (SBOO).
2. On June 26, 2014, the San Diego Water Board adopted Order No. R9-2014-0009, NPDES No. CA0108928, establishing waste discharge requirements for the U.S. Section of the International Boundary and Water Commission (USIBWC) to discharge up to 25 MGD of secondary-treated effluent from the South Bay International Wastewater Treatment Plant (SBIWTP) into the Pacific Ocean through the SBOO.
3. The effluents from the SBWRP and the SBIWTP co-mingle as they discharge through the SBOO. Thus, the receiving water monitoring program is conducted jointly by the City and USIBWC to characterize the ocean receiving waters and the effects of the combined discharge on the ocean receiving waters.
4. On November 12, 2014, the San Diego Water Board adopted Order No. R9-2014-0071, to modify the receiving water monitoring requirements in Order No. R9-2013-0006 to match the receiving water monitoring requirements in Order No. R9-2014-0009 and, thus enable the City and USIBWC to continue jointly conducting the receiving water monitoring program for the SBOO. The joint monitoring effort achieves maximum efficiency and economy of resources through sharing of technical resources, trained personnel, and associated costs. The joint monitoring effort also creates an integrated receiving water monitoring program covering the combined discharges from the SBWRP and the SBIWTP to ocean waters.

5. The City also performs receiving water monitoring at the Point Loma Ocean Outfall (PLOO) in accordance with Order No. R9-2017-0007, NPDES No. CA0107409, *Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of San Diego, E.W. Blom Point Loma Wastewater Treatment Plant discharge to the Pacific Ocean through the Point Loma Ocean Outfall*, adopted by the San Diego Water Board on April 12, 2017.

6. Chromium is a metal that is used mainly for making steel and other alloys. Chromium compounds, in either the chromium (III) or chromium (VI) forms, are used for chrome plating; the manufacture of dyes and pigments, leather, and wood preservation; and the treatment of cooling tower water. Smaller amounts are used in drilling muds, textiles, and toner for copying machines.[1] Total chromium is the sum of chromium (III) and chromium (VI) forms.

   a. For total recoverable chromium (III) (trivalent chromium), Order No. R9-2013-0006 contains performance goals and monthly influent and effluent monitoring requirements.

   b. The Clean Water Act has no analytical test method approved for trivalent chromium. In order to obtain a value for trivalent chromium, two separate analytical methods must be used: one for total recoverable chromium and one for total recoverable chromium (VI), with the later value subtracted from the former value.

Purpose of this Order

7. The City has requested that the San Diego Water Board modify the receiving water monitoring requirements in Order No. R9-2013-0006 (regulating the City's SBWRP discharge through SBOO) to align sampling frequencies and analysis methods with the receiving water monitoring program in Order No. R9-2017-0007 (regulating the City's PLOO discharge) to provide consistency and efficiency in the City's management of the monitoring programs.

8. The City has also requested that the San Diego Water Board add a footnote to Tables 8, E-3, and F-11 in Order No. R9-2013-0006 to recognize the lack of an analytical test method for trivalent chromium and to allow the City to meet the objective for chromium (III) as a total chromium objective. The City also requested that a footnote be added to Table E-2 in Order No. R9-2013-0006, to allow for the City to monitor for total recoverable chromium in lieu of total recoverable chromium (VI). This modification will make the requirements for recoverable chromium (VI) consistent throughout Order No. R9-2013-0006.

9. Based on Findings 1 through 8 of this Order, the San Diego Water Board is amending Order No. R9-2013-0006 to incorporate the changes requested by the City.

Legal Authorities

10. Section 13263(e) of the California Water Code provides that the San Diego Water Board may, upon application by any affected person, or on its own motion, review and revise waste discharge requirements. Section 122.62(a) of title 40 of the Code of Federal Regulations authorizes the reopening and modification of an NPDES permit based upon new information.

[1] Health Effects Notebook for Hazardous Air Pollutants, Chromium Compounds, Summary created in April 1992, updated in January 2000, available at https://www.epa.gov/sites/production/files/2016-09/documents/chromium-compounds.pdf

11. Order No. R9-2013-0006 is not being reopened for any other purpose than the revisions contained herein. Except as contradicted or superseded by the findings and directives set forth in this Order, all of the previous findings and directives of Order No. R9-2013-0006, as amended by Order No. R9-2014-0071, shall remain in full force and effect.

California Environmental Quality Act

12. This action is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act (Public Resources Code, division 13, chapter 3, section 21000 *et seq*.) in accordance with section 13389 of the Water Code.

Public Participation

13. The San Diego Water Board has notified all known interested parties of its intent to adopt this Order.

14. The San Diego Water Board in a public meeting heard and considered all comments pertaining to adoption of this Order.

15. Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 *et seq*. The State Water Board must receive the petition by 5:00 p.m., 30 days after the adoption date of this Order. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

IT IS HEREBY ORDERED:

1. This Order amends Order No. R9-2013-0006, NPDES No. CA0109045, as described in the revised version included as Attachment 1 to this Order. Added text to Order No. R9-2013-0006 is displayed in red-underline text and deleted text is displayed as ~~red-strikeout~~ text. Modifications to Order No. R9-2013-0006 were made to the following sections:

Page No.	Section No.
10 through 14	Section IV.A.2.a, Table 8
E-3 through E-5	Attachment E, Section II.A, Table E-1
E-6	Attachment E, Section III.A.1, Table E-2
E-6 through E-9	Attachment E, Section IV.A.1, Table E-3
E-11 through E-27	Attachment E, Section VIII
E-29 through E-34	Attachment E. Section X
F-20 through F-25	Attachment F, Section IV.C.4.g, Table F-11
F-30	Attachment F, Section VI.B
F-31 through F-34	Attachment F, Section VI.E

2. The amended version of Order No. R9-2013-0006, included as Attachment 1 to this Order, shall become effective on December 13, 2017.
3. San Diego Water Board staff is directed to prepare and post a conformed copy of Order No. R9-2013-0006, as amended by Order No. R9-2014-0071, incorporating the revisions made by this Order.

I, David W. Gibson, Executive Officer, do hereby certify that this Order is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on **December 13, 2017**.

TENTATIVE
David W. Gibson
Executive Officer

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REVISED TENTATIVE ORDER NO. R9-2013-0006 AS AMENDED BY ORDER NOS. R9-2014-0071 AND R9-2017-0023 NPDES NO. CA0109045

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF SAN DIEGO SOUTH BAY WATER RECLAMATION PLANT DISCHARGE TO THE PACIFIC OCEAN VIA THE SOUTH BAY OCEAN OUTFALL

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	City of San Diego
Name of Facility	South Bay Water Reclamation Plant
Facility Address	2411 Dairy Mart Road San Diego, CA 92154 San Diego County
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region have classified this discharge as a major discharge.	

Discharges by the City of San Diego from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Secondary Treated Effluent	32º 32' 15" N	117º 11' 00" W	Pacific Ocean

Table 3. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, San Diego Region on:	**February 13, 2013**
This Order shall become effective on:	**April 4, 2013**
This Order shall expire on:	**April 3, 2018**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Diego Region, on February 13, 2013, and amended on November 12, 2014 and December 13, 2017.

Tentative
David W. Gibson
Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	City of San Diego
Name of Facility	South Bay Water Reclamation Plant
Facility Address	2411 Dairy Mart Road San Diego, CA 92154 San Diego County
Facility Contact, Title, and Phone	Halla Razak, Director of Public Utilities, (858) 292-6401
Mailing Address	9192 Topaz Way, San Diego, CA 92123
Type of Facility	Publicly Owned Treatment Works (POTW)
Facility Flow Rate	15 million gallons per day (MGD)

II. FINDINGS

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

A. Background. The City of San Diego (hereinafter Discharger) is currently discharging pursuant to Order No. R9-2006-0067 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0109045. The Discharger submitted a Report of Waste Discharge, received July 1, 2011, and applied for a NPDES permit reissuance to discharge up to 15 MGD of secondary treated wastewater from the South Bay Water Reclamation Plant (hereinafter Facility) to the Pacific Ocean through the South Bay Ocean Outfall (SBOO). The application was deemed complete on July 31, 2011. By e-mail dated July 10, 2014, the Discharger requested that the San Diego Water Board modify the receiving water monitoring requirements in Order No. R9-2013-0006 to match the receiving water monitoring requirements in Order No. R9-2014-0009, to enable the Discharger and USIBWC to continue jointly conducting the receiving water monitoring program for SBOO.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates the Facility. The Facility treats wastewater collected from several City of San Diego communities, including San Ysidro, Otay Mesa, and the Tijuana River Valley. The Facility also receives raw wastewater from a portion of the Imperial Beach system, the City of Chula Vista, and unincorporated portions of South County and East County. Wastewater is primarily domestic sewage from residential and commercial activities. Overall, the Discharger provides municipal wastewater treatment services to a population of approximately 150,000.

Wastewater treatment unit operations and processes at the Facility consist of influent screening using mechanical bar screens, aerated grit chambers, primary sedimentation tanks, 1.5 million

gallons of primary flow equalization, air-activated sludge process and an anoxic selector zone, secondary clarifiers, mono-media (anthracite) filters, and ultraviolet disinfection.

The Facility produces tertiary treated reclaimed water which is distributed through a reclaimed water distribution system to qualified reclaimed water customers. All influent flow receives secondary treatment. The quantity of flow directed to the tertiary filtration facilities is dependent on anticipated recycled water demands. During times of no recycled water demand, up to 15 MGD of secondary effluent will be discharged from the Facility to the Pacific Ocean (a water of the United States) through the SBOO at Discharge Point No. 001 (see table on cover page). During times of high recycled water demand, the entire effluent flow may be directed to tertiary treatment and subsequent beneficial reuse.

Solids removed through the screening and grit removal processes are hauled offsite and disposed of in a landfill. Waste solids removed through the sedimentation/clarification process are returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant, where they are again removed and directed to anaerobic digesters at the Point Loma Wastewater Treatment Plant for stabilization. After digestion, the solids are dewatered and thickened for reuse as a soil amendment, or for disposal.

The Facility is capable of handling peak influent flows of up to 18 MGD and average daily flows of 15 MGD. The current maximum permitted flow is a calendar-monthly average flow of 15.0 MGD based on the design capacity.

The City of San Diego maintains a USEPA-approved pretreatment program administered by the Industrial Wastewater Control Section of the Environmental Monitoring and Technical Services Division of the Public Utilities Department.

The City of San Diego and the Federal Government jointly own and operate the SBOO.

Attachment B provides a map of the area around the Facility and the SBOO. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (Water Code) (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. Background and Rationale for Requirements. The San Diego Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E, G, and H are also incorporated into this Order.

E. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. Technology-Based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (40 CFR 122.44), require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. 40 CFR Part 133 establishes the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for biochemical oxygen demand (5-day @ 20°C)(BOD_5), total suspended solids (TSS), and the instantaneous minimum and maximums for pH. Technology-based effluent limitations contained in Table A of the 2009 *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (hereinafter Ocean Plan), which include grease and oil, suspended solids, settleable solids, turbidity, and pH, are also applicable to discharges from the Facility. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133. A detailed discussion of the technology-based effluent limitations (TBELs) development is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

H. Water Quality Control Plans. The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Region* (hereinafter Basin Plan) on September 8, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for the Pacific Ocean and other receiving waters addressed through the plan. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Resources Control Board (State Water Board). Beneficial uses applicable to the Pacific Ocean specified in the Basin Plan are as follows:

Table 5. Basin Plan Beneficial Uses of the Pacific Ocean

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	Industrial service supply; navigation; contact water recreation; non-contact water recreation; commercial and sport fishing; preservation of biological habitats of special significance; wildlife habitat; rare, threatened, or endangered species; marine habitat; aquaculture; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting.

Requirements of this Order implement the Basin Plan.

I. California Ocean Plan. The State Water Board adopted the Ocean Plan in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, and 2009. The State Water Board adopted the latest amendment on September 15, 2009 and it became effective on March 10, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table 6. Ocean Plan Beneficial Uses of the Pacific Ocean

Discharge Point	Receiving Water Name	Beneficial Use
001	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

In order to protect the beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

J. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.

K. Stringency of Requirements for Individual Pollutants. This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on BOD_5, TSS, pH, oil and grease, settleable solids, and turbidity. Restrictions on these pollutants are discussed in section IV.B of the Fact Sheet (Attachment F). This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved

pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs are based on the Ocean Plan, which was approved by USEPA on October 8, 2010. Most beneficial uses and water quality objectives contained in the Basin Plan and Ocean Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Water quality objectives contained in the Ocean Plan submitted to EPA after May 30, 2000 have subsequently been approved by EPA, and are applicable water quality standards pursuant to section 131.2(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

L. Antidegredation Policy. 40 CFR 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The San Diego Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet (Attachment F), the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

M. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent that those in the previous Order. As discussed in detail in the Fact Sheet (Attachment F), this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

N. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 USCA sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

O. Monitoring and Reporting. 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the San Diego Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

P. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The San Diego Water Board has also included in this Order special provisions applicable to the Discharger. A

rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

Q. Provisions and Requirements Implementing State Law. Some of the provisions/requirements in subsections VI.C of this Order are included to implement State law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

R. Executive Officer Delegation of Authority. The San Diego Water Board by prior resolution has delegated all matters that may legally be delegated to its Executive Officer to act on its behalf pursuant to Water Code section 13223. Therefore, the Executive Officer is authorized to act on the San Diego Water Board's behalf on any matter within this Order unless such delegation is unlawful under Water Code section 13223 or this Order explicitly states otherwise.

S. Notification of Interested Parties. The San Diego Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F).

T. Consideration of Public Comment. The San Diego Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F).

THEREFORE, IT IS HEREBY ORDERED, that Order No. R9-2006-0067 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of waste from the Facility to a location other than the SBOO (Discharge Point No. 001), unless specifically regulated by this Order or separate WDRs, is prohibited.

B. The Discharger must comply with Ocean Plan Discharge Prohibitions, incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

C. The Discharger must comply with Discharge Prohibitions contained in Chapter 4 of the Basin Plan, incorporated into this Order as if fully set forth herein and summarized in Attachment G, as a condition of this Order.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations and Performance Goals – Discharge Point No. 001

1. Final Effluent Limitations

a. The Discharger shall maintain compliance with the following effluent limitations at Monitoring Location E-001. Compliance shall be monitored at the same locations as described in the attached MRP (Attachment E).

Table 7. Effluent Limitations at E-001

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
Flow	MGD	15	--	--	--	--	--
BOD_5[1]	mg/L	30	45	--	--	--	--
	lbs/day	3,753	5,630	--	--	--	--
TSS[1]	mg/L	30	45	--	--	--	--
	lbs/day	3,753	5,630	--	--	--	--
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day	3,128	5,004	--	--	9,383	--
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
pH	standard units	--	--	--	6.0	9.0	--
Chlorine, Total Residual[2]	µg/L	--	--	760	--	5,700	190
	lbs/day	--	--	96	--	718	24

1 The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent.

2 The water quality objectives for total chlorine residual applicable to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

log y =-0.43 (log x) + 1.8,

where y =the water quality objective (in µg/l) to apply when chlorine is being discharged;

x =the duration of uninterrupted chlorine discharge in minutes.

Actual effluent limitations for total chlorine, when discharging intermittently, shall then be determined according to Implementation Procedures for Table B from the Ocean Plan, using a minimum probable initial dilution factor of 94.6 and a flow rate of 15 MGD.

2. Performance Goals

a. Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives, or for which reasonable potential to cause or contribute to an exceedance of water quality objectives cannot be determined, are referred to as performance goal constituents and are assigned the performance goals listed in the following table. Performance goal constituents shall be monitored at Monitoring Location No. E-001, but the results will be used for informational purposes only, not compliance determinations.

Table 8. Performance Goals

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic, Total Recoverable	ug/L	4.8E+02	2.8E+03	7.4E+03	--
	lbs/d	6.0E+01	3.5E+02	9.2E+02	--
Cadmium, Total Recoverable	ug/L	9.6E+01	3.8E+02	9.6E+02	--
	lbs/d	1.2E+01	4.8E+01	1.2E+02	--
Chromium VI, Total Recoverable [2]	ug/L	1.9E+02	7.6E+02	1.9E+03	--
	lbs/d	2.4E+01	9.6E+01	2.4E+02	--
Copper, Total Recoverable	ug/L	9.8E+01	9.6E+02	2.7E+03	--
	lbs/d	1.2E+01	1.2E+02	3.4E+02	--
Lead, Total Recoverable	ug/L	1.9E+02	7.6E+02	1.9E+03	--
	lbs/d	2.4E+01	9.6E+01	2.4E+02	--
Mercury, Total Recoverable	ug/L	3.8E+00	1.5E+01	3.8E+01	--
	lbs/d	4.7E-01	1.9E+00	4.8E+00	--
Nickel, Total Recoverable	ug/L	4.8E+02	1.9E+03	4.8E+03	--
	lbs/d	6.0E+01	2.4E+02	6.0E+02	--
Selenium, Total Recoverable	ug/L	1.4E+03	5.7E+03	1.4E+04	--
	lbs/d	1.8E+02	7.2E+02	1.8E+03	--
Silver, Total Recoverable	ug/L	5.2E+01	2.5E+02	6.5E+02	--
	lbs/d	6.5E+00	3.2E+01	8.2E+01	--
Zinc, Total Recoverable	ug/L	1.2E+03	6.9E+03	1.8E+04	--
	lbs/d	1.4E+02	8.6E+02	2.3E+03	--
Cyanide, Total Recoverable	ug/L	9.6E+01	3.8E+02	9.6E+02	--
	lbs/d	1.2E+01	4.8E+01	1.2E+02	--
Ammonia (expressed as nitrogen)	ug/L	5.7E+04	2.3E+05	5.7E+05	--
	lbs/d	7.2E+03	2.9E+04	7.2E+04	--
Chronic Toxicity	TUc	--	96	--	--
Phenolic Compounds (non-chlorinated)[3]	ug/L	2.9E+03	1.1E+04	2.9E+04	--
	lbs/d	3.6E+02	1.4E+03	3.6E+03	--
Chlorinated Phenolics[4]	ug/L	9.6E+01	3.8E+02	9.6E+02	--
	lbs/d	1.2E+01	4.8E+01	1.2E+02	--
Endosulfan	ug/L	8.6E-01	1.7E+00	2.6E+00	--
	lbs/d	1.1E-01	2.2E-01	3.2E-01	--
Endrin	ug/L	1.9E-01	3.8E-01	5.7E-01	--
	lbs/d	2.4E-02	4.8E-02	7.2E-02	--
HCH	ug/L	3.8E-01	7.6E-01	1.1E+00	--
	lbs/d	4.8E-02	9.6E-02	1.4E-01	--

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Radioactivity	pCi/L	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations, Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	--	--	2.1E+04
	lbs/day	--	--	--	2.6E+03
Antimony	µg/L	--	--	--	1.1E+05
	lbs/day	--	--	--	1.4E+04
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	4.2E+02
	lbs/day	--	--	--	5.3E+01
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	1.1E+05
	lbs/day	--	--	--	1.4E+04
Chlorobenzene	µg/L	--	--	--	5.4E+04
	lbs/day	--	--	--	6.8E+03
Chromium (III), Total Recoverable[2]	µg/L	--	--	--	1.8E+07
	lbs/day	--	--	--	2.3E+06
Di-n-butyl Phthalate	µg/L	--	--	--	3.3E+05
	lbs/day	--	--	--	4.2E+04
Dichlorobenzenes	µg/L	--	--	--	4.9E+05
	lbs/day	--	--	--	6.1E+04
Diethyl Phthalate	µg/L	--	--	--	3.2E+06
	lbs/day	--	--	--	3.9E+05
Dimethyl Phthalate	µg/L	--	--	--	7.8E+07
	lbs/day	--	--	--	9.8E+06
4,6-dinitro-2-methylphenol	µg/L	--	--	--	2.1E+04
	lbs/day	--	--	--	2.6E+03
2,4-dinitrophenol	µg/L	--	--	--	3.8E+02
	lbs/day	--	--	--	4.8E+01
Ethylbenzene	µg/L	--	--	--	3.9E+05
	lbs/day	--	--	--	4.9E+04
Fluoranthene	µg/L	--	--	--	1.4E+03
	lbs/day	--	--	--	1.8E+02
Hexachlorocyclopentadiene	µg/L	--	--	--	5.5E+03
	lbs/day	--	--	--	6.9E+02
Nitrobenzene	µg/L	--	--	--	4.7E+02
	lbs/day	--	--	--	5.9E+01
Thallium, Total Recoverable	µg/L	--	--	--	1.9E+02
	lbs/day	--	--	--	2.4E+01

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Toluene	µg/L	--	--	--	8.1E+06
	lbs/day	--	--	--	1.0E+06
Tributyltin	µg/L	--	--	--	1.3E-01
	lbs/day	--	--	--	1.7E-02
1,1,1-trichloroethane	µg/L	--	--	--	5.2E+07
	lbs/day	--	--	--	6.5E+06
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Acrylonitrile	µg/L	--	--	--	9.6E+00
	lbs/day	--	--	--	1.2E+00
Aldrin	µg/L	--	--	--	2.1E-03
	lbs/day	--	--	--	2.6E-04
Benzene	µg/L	--	--	--	5.6E+02
	lbs/day	--	--	--	7.1E+01
Benzidine	µg/L	--	--	--	6.6E-03
	lbs/day	--	--	--	8.3E-04
Beryllium	µg/L	--	--	--	3.2E+00
	lbs/day	--	--	--	3.9E-01
Bis(2-chloroethyl) Ether	µg/L	--	--	--	4.3E+00
	lbs/day	--	--	--	5.4E-01
Bis(2-ethlyhexyl) Phthalate	µg/L	--	--	--	3.3E+02
	lbs/day	--	--	--	4.2E+01
Carbon Tetrachloride	µg/L	--	--	--	8.6E+01
	lbs/day	--	--	--	1.1E+01
Chlordane	µg/L	--	--	--	2.2E-03
	lbs/day	--	--	--	2.8E-04
Chlorodibromomethane	µg/L	--	--	--	8.2E+02
	lbs/day	--	--	--	1.0E+02
Chloroform	µg/L	--	--	--	1.2E+04
	lbs/day	--	--	--	1.6E+03
DDT	µg/L	--	--	--	1.6E-02
	lbs/day	--	--	--	2.0E-03
1,4-dichlorobenzene	µg/L	--	--	--	1.7E+03
	lbs/day	--	--	--	2.2E+02
3,3'-dichlorobenzidine	µg/L	--	--	--	7.7E-01
	lbs/day	--	--	--	9.7E-02
1,2-dichloroethane	µg/L	--	--	--	2.7E+03
	lbs/day	--	--	--	3.3E+02

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
1,1-dichloroethylene	µg/L	--	--	--	8.6E+01
	lbs/day	--	--	--	1.1E+01
Dichlorobromomethane	µg/L	--	--	--	5.9E+02
	lbs/day	--	--	--	7.4E+01
Dichloromethane	µg/L	--	--	--	4.3E+04
	lbs/day	--	--	--	5.4E+03
1,3-dichloropropene	µg/L	--	--	--	8.5E+02
	lbs/day	--	--	--	1.1E+02
Dieldrin	µg/L	--	--	--	3.8E-03
	lbs/day	--	--	--	4.8E-04
2,4-dinitrotoluene	µg/L	--	--	--	2.5E+02
	lbs/day	--	--	--	3.1E+01
1,2-diphenylhydrazine	µg/L	--	--	--	1.5E+01
	lbs/day	--	--	--	1.9E+00
Halomethanes	µg/L	--	--	--	1.2E+04
	lbs/day	--	--	--	1.6E+03
Heptachlor	µg/L	--	--	--	4.8E-03
	lbs/day	--	--	--	6.0E-04
Heptachlor Epoxide	µg/L	--	--	--	1.9E-03
	lbs/day	--	--	--	2.4E-04
Hexachlorobenzene	µg/L	--	--	--	2.0E-02
	lbs/day	--	--	--	2.5E-03
Hexachlorobutadiene	µg/L	--	--	--	1.3E+03
	lbs/day	--	--	--	1.7E+02
Hexachloroethane	µg/L	--	--	--	2.4E+02
	lbs/day	--	--	--	3.0E+01
Isophorone	µg/L	--	--	--	7.0E+04
	lbs/day	--	--	--	8.7E+03
N-nitrosodimethylamine	µg/L	--	--	--	7.0E+02
	lbs/day	--	--	--	8.7E+01
N-nitrosodi-N-propylamine	µg/L	--	--	--	3.6E+01
	lbs/day	--	--	--	4.5E+00
N-nitrosodiphenylamine	µg/L	--	--	--	2.4E+02
	lbs/day	--	--	--	3.0E+01
PAHs	µg/L	--	--	--	8.4E-01
	lbs/day	--	--	--	1.1E-01
PCBs	µg/L	--	--	--	1.8E-03
	lbs/day	--	--	--	2.3E-04

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
TCDD Eqivalents	µg/L	--	--	--	3.7E-07
	lbs/day	--	--	--	4.7E-08
1,1,2,2-tetrachloroethane	µg/L	--	--	--	2.2E+02
	lbs/day	--	--	--	2.8E+01
Tetrachloroethylene	µg/L	--	--	--	1.9E+02
	lbs/day	--	--	--	2.4E+01
Toxaphene	µg/L	--	--	--	2.0E-02
	lbs/day	--	--	--	2.5E-03
Trichloroethylene	µg/L	--	--	--	2.6E+03
	lbs/day	--	--	--	3.2E+02
1,1,2-trichloroethane	µg/L	--	--	--	9.0E+02
	lbs/day	--	--	--	1.1E+02
2,4,6-trichlorophenol	µg/L	--	--	--	2.8E+01
	lbs/day	--	--	--	3.5E+00
Vinyl Chloride	µg/L	--	--	--	3.4E+03
	lbs/day	--	--	--	4.3E+02

[1] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation, a value of 6.1E-02 represents 6.1×10^{-2} or 0.061, 6.1E+02 represents 6.1×10^{2} or 610, and 6.1E+00 represents 6.1×10^{0} or 6.1.

[2] The Discharger~~s~~ may, at their option, apply this performance goal as a total chromium performance goal.

[3] Non-chlorinated phenolic compounds represent the sum of 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 4-nitrophenol, and phenol.

[4] Chlorinated phenolic compounds represent the sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The receiving water limitations set forth below for ocean waters are based on water quality objectives contained in the Basin Plan and Ocean Plan and are a required part of this Order. The discharge of waste shall not cause or contribute to violation of these limitations in the Pacific Ocean. Compliance with these limitations shall be determined from samples collected at stations representative of the area within the waste field where initial dilution is completed.

1. Bacterial Characteristics

a. Within a zone bounded by the shoreline and a distance of three nautical miles from the shoreline, including all kelp beds, the following bacterial objectives shall be maintained throughout the water column. The zone of initial dilution for the ocean outfall is excluded.

30-day Geometric Mean – The following standards are based on the geometric mean of the five most recent samples from each site:

i. Total coliform density shall not exceed 1,000 per 100 ml;

ii. Fecal coliform density shall not exceed 200 per 100 ml; and

iii. Enterococcus density shall not exceed 35 per 100 ml.

Single Sample Maximum:

iv. Total coliform density shall not exceed 10,000 per 100 ml;

v. Fecal coliform density shall not exceed 400 per 100 ml;

vi. Enterococcus density shall not exceed 104 per 100 ml; and

vii. Total coliform density shall not exceed 1,000 per 100 ml when the fecal coliform/total coliform ratio exceeds 0.1.

b. The Initial Dilution Zone for any wastewater outfall 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.

c. At all areas where shellfish may be harvested for human consumption, as determined by the San Diego Water Board, the median total coliform density shall not exceed 70 per 100 ml throughout the water column, and not more than 10 percent of the samples shall exceed 230 per 100 ml.

2. Physical Characteristics

a. Floating particulates and grease and oils shall not be visible.

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.

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

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

3. Chemical Characteristics

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

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

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

d. The concentration of substances set forth in Chapter II, Table B of the Ocean Plan, shall not be increased in marine sediments to levels that would degrade indigenous biota.

e. The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.

f. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.

g. Numerical water quality objectives established in Chapter II, Table B of the California Ocean Plan shall not be exceeded outside of the zone of initial dilution as a result of the discharges from the Facility.

4. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.

b. The natural taste, odor, color of fish, shellfish, or other marine resources used for human consumption shall not be altered.

c. 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.

5. Radioactivity

a. Discharge of radioactive waste shall not degrade marine life.

B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

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

2. **San Diego Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. The Facility shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to Title 23, Division 3, Chapter 26 of the California Code of Regulations (CCR).

   b. 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, or design capacity re-rating request, prepared by the design engineer. For design capacity re-rating requests, the certification report shall be prepared by the engineer who evaluated the treatment facility capacity. The certification report shall:

      i. Identify the design capacity of the treatment facility, including the daily and 30-day design capacity;

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

      iii. Contain a requirement-by-requirement analysis, based on acceptable engineering practices, of the process and physical design of the facility to ensure compliance with this Order.

      iv. Contain the signature and engineering license number of the engineer preparing the certification report affixed to the report. If reasonable, the certification report shall be submitted prior to beginning construction. The Discharger shall not initiate a discharge from a new or expanded treatment facility or at a daily flow rate in excess of its previously approved design capacity until:

         (a) The certification report is received by the San Diego Water Board,

         (b) The San Diego Water Board has received written notification of completion of construction (new or expanded treatment facilities only),

         (c) An inspection of the facility has been made by the San Diego Water Board or their designated representatives (new or expanded treatment facilities only), and

         (d) The San Diego Water Board has provided the Discharger with written authorization to initiate discharge from a new or expanded treatment facility or at a daily flow rate in excess of its previously approved design capacity.

   c. 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.

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

e. This Order expires on April 3, 2018, after which, the terms and conditions of this permit are automatically continued pending issuance of a new permit, provided that all requirements of USEPA's NPDES regulations at 40 CFR 122.6 and the State's regulations at Title 23, section 2235.4 of the CCR regarding the continuation of expired permits and waste discharge requirements are met.

f. 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.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an Ocean Plan Table B water quality objective.

b. This Order may be reopened for modification of the monitoring and reporting requirements and/or special studies requirements, at the discretion of the San Diego Water Board. Such modification(s) may include, but is (are) not limited to, revision(s) (i) to implement recommendations from Southern California Coastal Water Research Project (SCCWRP), (ii) to develop, refine, implement, and/or coordinate a regional monitoring program, (iii) to develop and implement improved monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, Resolution in Support of a Regional Monitoring Framework, and/or (iv) to add provisions to require the Discharger to evaluate and provide information on cost and values of the montoring and reporting program.

c. This Order may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

i. Violation of any terms or conditions of this Order.

ii. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts.

iii. 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 modifications, revocation and reissuance, or termination of this Order does not stay any condition of this Order. Notification by the Discharger of planned operational or facility changes, or anticipated noncompliance with this Order does not stay any condition of this Order.

d. 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 San Diego Water Board may institute proceedings under these regulations to modify or revoke and reissue the Order to conform to the toxic effluent standard or prohibition.

e. This Order may be re-opened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.

f. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include new Minimum Levels (MLs).

g. This Order may be re-opened and modified to revise effluent limitations as a result of future Basin Plan Amendments, or the adoption of a total maximum daily load (TMDL) for the receiving water.

h. This Order may be re-opened upon submission by the Discharger of adequate information, as determined by this San Diego Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.

i. This Order may be re-opened and modified to revise the toxicity language once that language becomes standardized.

j. This Order may also be re-opened and modified, revoked and, reissued or terminated in accordance with the provisions of 40 CFR 122.44, 122.62 to 122.64, 125.62, and 125.62. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order and permit, and endangerment to human health or the environment resulting from the permitted activity.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Spill Prevention and Response Plans

i. For purposes of this section of the Order, a spill is a discharge of treated or untreated wastewater that occurs at or downstream of the Facility headworks, in violation of Discharge Prohibition III.A of this Order, or a discharge of other materials related to the Facility. The term “spill” as used in this section of the Order does not include sanitary sewer overflows from the sewage collection system that are reportable under separate waste discharge requirements.

ii. The Discharger shall maintain a Spill Prevention Plan (SPP) for the Facility in an up-to-date condition and shall amend the SPP 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 spills. The Discharger shall review and amend the SPP as appropriate after each spill from the Facility. The SPP and any amendments thereto shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. The Discharger shall submit the SPP and any amendments thereto to the San Diego Water Board upon request of the San Diego Water Board. The

Discharger shall ensure that the up-to-date SPP is readily available to the sewerage system personnel at all times and that the sewerage system personnel are familiar with it.

iii. The Discharger shall maintain a Spill Response Plan (SRP) for the Facility in an up-to-date condition and shall amend the SRP, as necessary. The Discharger shall review and amend the SRP as appropriate after each spill from the Facility. The SRP and any amendments thereto shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. The Discharger shall submit the SRP and any amendments thereto to the San Diego Water Board upon request of the San Diego Water Board. The Discharger shall ensure that the up-to-date SRP is readily available to the sewerage system personnel at all times and that the sewerage system personnel are familiar with it.

b. Spill Reporting Requirements

The Discharger shall report spills, as defined in section VI.C.2.a.i above, in accordance with the following procedures:

i. If a spill results in a discharge of treated or untreated wastewater that is equal to or exceeds 1,000 gallons, and/or results in a discharge to a drainage channel and/or surface water; or results in a discharge to a storm drain that was not fully captured and returned to the sanitary sewer system, the Discharger shall:

(a) Report the spill to the San Diego Water Board by telephone, by voice mail, or by FAX within 24 hours from the time the Discharger becomes aware of the spill. The Discharger shall inform the San Diego Water Board of the date of the spill, spill location and its final destination, time the spill began and ended, estimated total spill volume, and type of spill material.

(b) Submit a written report, as well as any additional pertinent information, to the San Diego Water Board no later than 5 days from the time the Discharger becomes aware of the spill.

(c) The San Diego Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours.

ii. If a spill results in a discharge of treated or untreated wastewater less than 1,000 gallons and the discharge does not reach a drainage channel, surface waters, or storm drain, the Discharger is not required to notify the San Diego Water Board within 24 hours, or provide a 5-day written report.

iii. For spills of material other than treated or untreated wastewater that cause, may cause, or are caused by significant operational failure, or endangers or may endanger human health or the environment, the Discharger shall notify the San Diego Water Board by telephone, by voice mail, or by FAX within 24 hours from the time the Discharger becomes aware of the spill. The Discharger shall inform the San Diego Water Board of the date of the spill, spill location and its final

destination, time the spill began and ended, estimated total spill volume, and type of spill material.

iv. For all spills, the Discharger shall include a detailed summary of spills in the monthly self-monitoring report for the month in which the spill occurred. If no spills occurred during the calendar month, the Discharger shall report no spills in the monthly self-monitoring report for that calendar month.

v. The spill reporting requirements contained in this Order do not relieve the Discharger of responsibilities to report to other agencies, such as the California Emergency Management Agency (EMA) and the County of San Diego Department of Environmental Health Services.

c. Toxicity Reduction Requirements

If the performance goal for chronic toxicity is exceeded in any one test at Monitoring Location E-001, then within 15 days from the time the Discharger becomes aware of the exceedance, the Discharger shall begin conducting six additional tests, bi-weekly, over a 12 week period.

If the toxicity performance goal is exceeded in any of these six additional tests, then the Discharger shall notify the San Diego Water Board. If the San Diego Water Board determines that the discharge consistently exceeds a performance goal, then the Discharger shall initiate a Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) in accordance with the TRE workplan, *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (USEPA 833-B-99-002, 1999), and USEPA TIE guidance documents (Phase I, EPA/600/6-91/005F, 1992; Phase II, EPA/600/R-92/080, 1993; and Phase III, EPA/600/R-92/081, 1993). Once the source of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the chronic toxicity performance goal identified in section IV.A.2 of this Order.

Within 30 days of completion of the TRE/TIE, the Discharger shall submit the results of the TRE/TIE, including a summary of the findings, data generated, a list of corrective actions necessary to achieve consistent compliance with the toxicity performance goal established in this Order and prevent recurrence of exceedances of that performance goal, and a time schedule for implementation of such corrective actions. The corrective actions and time schedule shall be modified at the direction of the San Diego Water Board.

If no toxicity is detected in any of these additional six tests, then the Discharger may return to the testing frequency specified in the MRP.

d. Toxicity Reduction Evaluation (TRE)

The Discharger shall develop a TRE workplan in accordance with TRE procedures established by USEPA in the following guidance manuals.

i. *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070).

ii. *Toxicity Identification Evaluation, Phase I* (EPA/600/6-91/005F).

iii. *Methods for Aquatic Toxicity Identification Evaluations, Phase II* (EPA/600/R-92/080).

iv. *Methods for Aquatic Toxicity Identification Evaluations, Phase III* (EPA/600/R-92/081).

The Discharger shall submit the TRE workplan to the San Diego Water Board within 180 days of the adoption of this Order. The TRE workplan shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation and Maintenance Specifications – Not Applicable

5. Special Provisions for Wastewater Facilities (POTWs Only)

a. South Bay Ocean Outfall Capacity

No later than 180 days prior to this Order's expiration date, the Discharger shall submit a written report to the San Diego Water Board regarding capacity of the SBOO that addresses the following items:

i. Most current report on the SBOO capacity conducted within 1 year of the expiration date of this Order;

ii. The Discharger's best estimate of when the average daily flow will equal or exceed the SBOO capacity;

iii. The Discharger's intended schedule for studies, design, and other steps needed to provide additional capacity for the SBOO and/or to control the flow rate before the flow rate is equal to the current outfall capacity;

iv. Report on the physical condition of the SBOO; and

v. A certified statement signed by a California Licensed Engineer that states that the capacity of the SBOO is at least 40 MGD (or the total permitted discharge from the Facility and SBIWTP, whichever is higher)..

vi. The report must be signed and agreed upon by each of the parties discharging through the SBOO

b. POTW Capacity

Four years prior to reaching POTW design capacity, the Discharger shall submit a POTW Capacity report to the San Diego Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased. A

notification and copy of the report shall be sent to appropriate local elected officials, local permitting agencies, and the press. The required technical report shall be reviewed, approved, and jointly submitted by all planning and building departments having jurisdiction in the area served by the POTW. Opportunities for public participation and involvement are required during the preparation and development of the technical report. The report shall be accompanied by a statement outlining how interested persons were involved in the preparation of the technical report.

c. Pretreatment Program

i. The Discharger shall be responsible for the performance of all pretreatment requirements contained in 40 CFR Part 403, including any subsequent revisions in 40 CFR Part 403. Where 40 CFR Part 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 6 months of the issuance date of this Order, or the effective date of the revisions to 40 CFR Part 403, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies imposed by the USEPA and/or the San Diego Water Board, as provided in the CWA and/or the Water Code.

ii. The Discharger shall implement and enforce its approved pretreatment program, and all subsequent revisions, which are hereby made enforceable conditions of this Order. The Discharger shall enforce the requirements promulgated pursuant to 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.

iii. The Discharger shall perform the pretreatment functions required by 40 CFR 403, including, but not limited to:

(a) Implement the necessary legal authorities as required by 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 required by 40 CFR 403.8 (f) (2); and

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

iv. By March 1 of each year, the Discharger shall submit an annual report to the San Diego Water Board; USEPA Region 9; the State Water Board, Division of Water Quality, Regulations Unit; and the San Diego County Department of Health Services, Hazardous Materials Division, describing its pretreatment activities over the previous calendar year. In the event the Discharger is not in compliance with any condition or requirement of this Order, or any pretreatment compliance inspection/audit

requirements, the Discharger shall include the reasons for noncompliance and state how and when it will 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 known or suspected to be discharged by industrial users that the USEPA has identified under Section 307 (d) of the CWA. This will include an annual full priority pollutant scan. Wastewater sampling and analysis shall be performed in accordance with the minimum frequency of analysis required by the Monitoring and Reporting program of this Order (Attachment E 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 or pass through. The Discharger is not required to sample and analyze for asbestos. Sludge sampling and analysis is addressed in Attachment E of this Order. Wastewater sampling and analysis shall be performed in accordance with 40 CFR Part 136.

(b) A discussion of upset, interference, or pass through, if any, at the Facility, which the Discharger knows or suspects were caused by industrial users. The discussion shall include the reasons why the incidents occurred, any corrective actions taken, and, if known, the name and address of the responsible industrial user(s). 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 non-compliance with effluent limitations and/or sludge disposal requirements.

(c) The Discharger shall characterize the compliance status of each significant industrial user (SIU) by providing a list or table for 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 SIU during the year;

(4) Number of samples and inspections by 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 non-compliance as defined at 40 CFR 403.12 (f)(2)(vii), at any time during the year;

(8) A summary of enforcement actions or any other actions taken against SIUs 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 SIUs into compliance; and

(9) The name(s) of any SIU(s) required to submit a baseline monitoring report and any SIUs currently discharging under a baseline monitoring report.

(d) A brief description of any programs the Discharger implements to reduce pollutants from industrial users not classified as SIUs.

(e) 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, funding, and staffing levels;

(f) A summary of the annual pretreatment program budget, including the cost of pretreatment program functions and equipment purchases;

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

(h) A description of any changes in sludge disposal methods; and

(i) A discussion of any concerns not described elsewhere in the annual report.

v. The Discharger shall submit a semiannual SIU compliance status report to the San Diego Water Board, the State Water Board, and the USEPA. The reports shall cover the periods of January 1 through June 30, and July 1 through December 31 and shall be submitted no later than September 1 and March 1, respectively. 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 non-compliance; and

(d) The status of enforcement actions or other actions taken in response to SIU noncompliance identified in previous reports.

vi. The Discharger shall continue with its implementation of a Non-Industrial 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 Program shall be reviewed periodically and addressed in the annual report required under Section VI.C.5.c.iv.

vii. The Discharger shall provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1) following permit reissuance (40 CFR 122.44(j)(2)(ii)).

d. Sludge (Biosolids) Disposal Requirements

i. The handling, treatment, use, management, and disposal of sludge and solids derived from wastewater treatment must comply with applicable provisions of CWA section 405 and USEPA regulations at 40 CFR Parts 257, 258, 501, and 503, including all monitoring, record keeping, and reporting requirements.

ii. Sludge and wastewater solids must be disposed of in a municipal solid waste landfill, reused by land application, disposed of in a sludge-only landfill, or used in an application approved by the San Diego Water Board in accordance with 40 CFR Parts 258 and 503 and Title 23, Chapter 15 of the CCR. If the Discharger desires to dispose of solids and/or sludge in a different manner, a request for permit modification must be submitted to the USEPA and to this San Diego Water Board at least 180 days prior to beginning the alternative means of disposal.

iii. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR Part 258 pertaining to providing information to the public. In the annual self-monitoring report, the Discharger shall include the amount of sludge placed in the landfill as well as the landfill to which it was sent.

iv. All requirements of 40 CFR Part 503 and 23 CCR Chapter 15 are enforceable whether or not the requirements of those regulations are stated in an NPDES permit or any other permit issued to the Discharger.

v. 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.

vi. 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.

vii. The solids and sludge treatment and storage site shall have adequate facilities 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, at the minimum, from a 100-year 24-hour storm event, 100-year peak stream flows as defined by the San Diego County flood control agency, and protection from the highest possible tidal stage that may occur.

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

e. Collection System

On May 2, 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, a Statewide General WDR for Sanitary Sewer Systems. Order No. 2006-0003 requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the General WDR.

6. Other Special Provisions – Not Applicable

7. Compliance Schedule – Not Applicable

VII. COMPLIANCE DETERMINATION

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

A. Compliance with Average Monthly Effluent Limitation (AMEL)

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

B. Compliance with Average Weekly Effluent Limitation (AWEL)

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

C. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow weighted 24-hour composite samples, or grab, as specified in the MRP (Attachment E). If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for that parameter for that one day only within the reporting period. For any one day during which no sample is taken, no compliance determination can be made for that day.

D. Compliance with Instantaneous Minimum Effluent Limitation

The instantaneous minimum effluent concentration limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation.)

E. Compliance with Instantaneous Maximum Effluent Limitation

The instantaneous maximum effluent concentration limitation shall apply to grab sample determinations. If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of noncompliance with the instantaneous maximum effluent limitation).

F. Compliance with 6-Month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the 6-month median effluent limitation for a given parameter, an alleged violation will be flagged and the Discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the 6-month median, the Discharger will be considered out of compliance for the 180-day period. For any 180-day period during which no sample is taken, no compliance determination can be made for the 6-month median limitation.

G. Mass and Concentration Limitations

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be “Not Detected” (ND) or “Detectable but not quantifiable” (DNQ), the corresponding mass emission rate (MER) determined from that sample concentration shall also be reported as “ND” or “DNQ”.

H. Percent Removal

Compliance with percent removal requirements for average monthly percent removal of BOD_5 and TSS shall be determined separately for each wastewater treatment facility discharging through an outfall. For each wastewater treatment facility, the monthly average percent removal is the average of the calculated daily discharge percent removals only for days on which the constituent concentration is monitored in both the influent and effluent of the wastewater treatment facility at the locations specified in the MRP (Attachment E) within a calendar month.

The percent removal for each day shall be calculated according to the following equation:

$$\text{Daily discharge percent removal} = \frac{\textit{Influent concentration} - \textit{Effluent concentration}}{\textit{Influent concentration}} \times 100\%$$

I. Ocean Plan Provisions for Table B Constituents

1. Compliance Determination

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

a. Compliance with Single-constituent Effluent Limitations

The Discharger shall be deemed out of compliance with an effluent limitation or discharge specification if the concentration of the constituent in the monitoring sample is greater than the effluent limitation or discharge specification and greater than or equal to the Minimum Level (ML).

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

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

c. Multiple Sample Data Reduction.

The concentration of the pollutant in the effluent may be estimated from the result of a single sample analysis or by a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses when all sample results are quantifiable (i.e., greater than or equal to the reported ML). When one or more sample results are reported as ND or DNQ, the central tendency concentration of the pollutant shall be the median (middle) value of the multiple samples. If, in an even number of samples, one or both of the middle values is ND or DNQ, the median will be the lower of the two middle values.

d. Mass Emission Rate

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

Mass Emission Rate (lbs/day) = 8.34 x Q x C

In which Q and C are the flow rate in million gallons per day and the constituent concentration in mg/L, respectively, and 8.34 is a conversion factor (lbs/gallon of water). 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.

J. Bacterial Standards and Analysis

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

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

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

2. For all bacterial analyses, sample dilutions should be performed so the range of values extends from 2 to 16,000 CFU (colony-forming units). 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 listed in 40 CFR Part 136 or any improved method determined by the San Diego Water 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*, listed under 40 CFR Part 136, and any other method approved by the San Diego Water Board.

K. Single Operational Upset

A single operational upset (SOU) that leads to simultaneous violations or more than one pollutant parameter shall be treated as a single violation and limits the Discharger's liability in accordance with the following conditions:

1. A SOU is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.

2. A Discharger may assert SOU to limit liability only for those violations which the Discharger submitted notice of the upset as required in section I.H of Attachment D.

3. For purposes outside of Water Code section 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU), the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations, shall be in accordance with the USEPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989).

4. For purposes of Water Code section 13385(h) and (i), determination of compliance and civil liability (including any more specific definition of SOU), the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations shall be in accordance with Water Code section 13385(f)(2).

L. Chronic Toxicity

Chronic toxicity is used to measure the acceptability of waters for supporting a healthy marine biota until approved methods are developed to evaluate biological response. Compliance with the chronic toxicity performance goal, established in section IV.A.2 of this Order for Discharge Point No. 001, shall be determined using critical life stage toxicity tests in accordance with procedures prescribed by the Ocean Plan (2009) and restated in the MRP (Attachment E). Chronic toxicity shall be expressed as Toxic Units Chronic (TUc), where:
TUc = 100 / NOEL .

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

M. Acute Toxicity

Acute toxicity is used to measure the acceptability of waters for supporting a healthy marine biota until approved methods are developed to evaluate biological response. Compliance with

the acute toxicity performance goal established in section IV.A.2 of this Order for Discharge Point No. 001 shall be determined using the following formula:

TUc = 100 / 96-hr LC 50

where LC 50 (percent waste giving 50 percent survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Appendix III of the 2009 Ocean Plan. 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 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

TUa = (log[100 – S])/1.7

where S is the percent survival in 100 percent waste. If S is greater than 99, TUa shall be reported as zero.

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ATTACHMENT A – DEFINITIONS AND ACRYONYMS

Acute Toxicity

a. Acute Toxicity (TUa)
Expressed in Toxic Units Acute (TUa)

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

b. Lethal Concentration 50% (LC_{50})
LC_{50} (percent waste giving 50% survival of test organisms) shall be determined by static or continuous flow bioassay techniques using standard marine test species as specified in Ocean Plan Appendix III. 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 percent survival of the test species in 100 percent waste, the toxicity concentration shall be calculated by the expression:

$$TUa = \frac{\log (100 - S)}{1.7}$$

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

Antidegradation.
Policies which ensure protection of water quality for a particular body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters.

Areas of Special Biological Significance (ASBS)
Those areas designated by the State Water Board as ocean areas requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable. All Areas of Special Biological Significance are also classified as a subset of STATE WATER QUALITY PROTECTION AREAS.

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

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

Bioaccumulative Pollutants
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Bioassay
A test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

Biochemical Oxygen Demand (BOD)
A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days, BOD_5) in a wastewater sample; it is used as a measurement of the readily decomposable organic content of a wastewater.

Biosolids
Sewage sludge that is used or disposed through land application, surface disposal, incineration, or disposal in a municipal solid waste landfill. Sewage sludge is defined as solid, semi-solid, or liquid untreated residue generated during the treatment of domestic sewage in a treatment facility.

California Code of Regulations (CCR)
The official compilation and publication of the regulations adopted, amended or repealed by state agencies pursuant to the Administrative Procedure Act (APA). Properly adopted regulations that have been filed with the Secretary of State have the force of law.

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

Chronic Toxicity
This parameter shall be used to measure the acceptability of waters for supporting a healthy marine biota until improved methods are developed to evaluate biological response.

a. Chronic Toxicity (TUc)

Expressed as Toxic Units Chronic (TUc)

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

b. No Observed Effect Level (NOEL)

The NOEL is expressed as the maximum percent effluent or receiving water that causes no observable effect on a test organism, as determined by the result of a critical life stage toxicity test listed in Ocean Plan Appendix III.

Clean Water Act (CWA)
An act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et. Seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

Code of Federal Regulations (CFR)
The codification (arrangement of) the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. Title 40 of the CFR contains the environmental regulations.

Composite Sample
Sample composed of two or more discrete samples of at least 100 milliliters collected at periodic intervals during the operating hours of a facility over a 24-hour period. The aggregate sample will reflect the average water quality covering the compositing or sample period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

Conventional Pollutants
Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed; defined at 40 CFR 401.16 as BOD, Total Suspended Solids (TSS), fecal coliform bacteria, oil and grease, and pH.

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

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

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

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.

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

Detected, but Not Quantified (DNQ)
Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's Method Detection Limit (MDL).

Dilution Credit
The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Dilution Ratio T
The critical low flow of the upstream receiving water divided by the flow of the effluent discharged.

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

Discharge
When used without qualification means the discharge of a pollutant. Discharge of a pollutant means:

1. Any addition of any pollutant or combination of pollutants to waters of the United States from any point source, or

2. Any addition of any pollutant or combination of pollutants to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft that is being used as a means of transportation.

This definition includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works. This term does not include an addition of pollutants by any indirect Discharger.

Discharge Monitoring Report (DMR)
Means the USEPA uniform form, including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees. DMRs must be used by approved states as well as by USEPA. The USEPA will supply DMRs to any approved state upon request. The USEPA national forms may be modified to substitute the state agency name, address, logo, and other similar information, as appropriate, in place of USEPA's.

Downstream Ocean Waters
Waters downstream with respect to ocean currents.

Dredged Material
Any material excavated or dredged from the navigable waters of the United States, including material otherwise referred to as “spoil”.

Effluent Limitation
Any restriction imposed by an Order on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the United States, the waters of the contiguous zone, or the ocean.

Enclosed Bays
Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Endosulfan
The sum of endosulfan-alpha and -beta and endosulfan sulfate.

Estuaries and Coastal Lagoons
Are waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but are not limited to the Sacramento-San Joaquin Delta as defined by section 12220 of the Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, and Russian Rivers.

Grab Sample
An individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes. The sample is taken from a waste stream on a one-time basis without consideration of the flow rate of the waste stream and without consideration of time of day.

Halomethanes
Shall mean the sum of bromoform, bromomethane (methyl bromide) and chloromethane (methyl chloride).

HCH
Shall mean the sum of the alpha, beta, gamma (Lindane) and delta isomers of hexachlorocyclohexane.

Initial Dilution
The process that results in the rapid and irreversible turbulent mixing of wastewater with ocean water around the point of discharge.

For a submerged buoyant discharge, characteristic of most municipal and industrial wastes that are released from the submarine outfalls, the momentum of the discharge and its initial buoyancy act together to produce turbulent mixing. Initial dilution in this case is completed when the diluting wastewater ceases to rise in the water column and first begins to spread horizontally.

For shallow water submerged discharges, surface discharges, and non-buoyant discharges, characteristic of cooling water wastes and some individual discharges, turbulent mixing results primarily from the momentum of discharge. Initial dilution, in these cases, is considered to be completed when the momentum induced velocity of the discharge ceases to produce significant mixing of the waste, or the diluting plume reaches a fixed distance from the discharge to be specified by the San Diego Water Board, whichever results in the lower estimate for initial dilution.

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

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

Kelp Beds
For purposes of the bacteriological standards of the Ocean Plan, are significant aggregations of marine algae of the genera Macrocystis and Nereocystis. Kelp beds include the total foliage canopy of Macrocystis and Nereocystis plants throughout the water column.

Mariculture
The culture of plants and animals in marine waters independent of any pollution source.

Material
(a) In common usage: (1) the substance or substances of which a thing is made or composed (2) substantial; (b) For purposes of the Ocean Plan relating to waste disposal, dredging and the disposal of dredged material and fill, MATERIAL means matter of any kind or description which is subject to regulation as waste, or any material dredged from the navigable waters of the United States. See also, DREDGED MATERIAL.

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

MER
Mass Emission Rates

Method Detection Limit (MDL)
The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in Title 40 of the Code of Federal Regulations (CFR), Part 136, Attachment B.

Million Gallons Per Day (MGD)
A unit of flow commonly used for wastewater discharges. One MGD is equivalent to 1.547 cubic feet per second.

Minimum Level (ML)
The concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

MRP
Monitoring and Reporting Program

Natural Light
Reduction of natural light may be determined by the San Diego Water Board by measurement of light transmissivity or total irradiance, or both, according to the monitoring needs of the San Diego Water Board.

National Pollutant Discharge Elimination System (NPDES)
The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of CWA.

Not Detected (ND)
Those sample results less than the laboratory's MDL.

Nuisance
Water Code section 13050, subdivision (m), defines nuisance as anything which meets all of the following requirements:

1. Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property.
2. Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.
3. Occurs during, or as a result of, the treatment or disposal of wastes.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. If a discharge outside the territorial waters of the State could affect the quality of the waters of the State, the discharge may be regulated to assure no violation of the Ocean Plan will occur in ocean waters.

PAHs (polynuclear aromatic hydrocarbons)
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.

PCBs (polychlorinated biphenyls)
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.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of Ocean Plan Table B pollutants through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The San Diego Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Publicly Owned Treatment Works (POTW)
A treatment works, as defined by Section 212 of the CWA that is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant (40 CFR Section 403.3).

Reported Minimum Level
The ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the San Diego Water Board either from Appendix II of the Ocean Plan in accordance with section III.C.5.a of the Ocean Plan or established in accordance with section III.C.5.b of the Ocean Plan. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are

matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the reported ML.

ROWD
Report of Waste Discharge

Sanitary Sewer Overflow (SSO)
Any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system.

Sanitary Sewer System
Any system of pipes, pump stations, sewer lines, or other conveyances, upstream of a wastewater treatment plant headworks used to collect and convey wastewater to the wastewater treatment facility. Temporary storage and conveyance facilities (such as vaults, temporary piping, construction trenches, wet wells, impoundments, tanks, etc.) are considered to be part of the sanitary sewer system, and discharges into these temporary storage facilities are not considered to be SSOs.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

SBIWTP
South Bay International Wastewater Treatment Plant

SBOO
South Bay Ocean Outfall

Secondary Treatment Standards
Technology-based requirements for direct discharging municipal sewage treatment facilities. Standards are based on a combination of physical and biological processes typical for the treatment of pollutants in municipal sewage. Standards are expressed as a minimum level of effluent quality in terms of: BOD_5, TSS, and pH (except as provided for special considerations and treatment equivalent to secondary treatment).

Shellfish
Organisms identified by the State of California Department of Public Health as shellfish for public health purposes (i.e., mussels, clams, and oysters).

Significant Difference
Defined as a statistically significant difference in the means of two distributions of sampling results at the 95 percent confidence level.

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

SMRs
Self Monitoring Reports

State Water Quality Protection Areas (SWQPAs)
Non-terrestrial marine or estuarine areas designated to protect marine species or biological communities from an undesirable alteration in natural water quality. All AREAS OF SPECIAL BIOLOGICAL SIGNIFICANCE (ASBS) that were previously designated by the State Water Board in Resolution Nos. 74-28, 74-32, and 75-61 are now also classified as a subset of State Water Quality Protection Areas and require special protections afforded by the Ocean Plan.

Technology-Based Effluent Limitation (TBELs)
A permit limitation for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

Toxic Pollutant
Pollutants or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator of USEPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions, (including malfunctions in reproduction), or physical deformations, in such organisms or their offspring. Toxic pollutants also include those pollutants listed by the Administrator under CWA section 307(a)(1) or any pollutant listed under section 405 (d) which relates to sludge management.

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

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

Total Suspended Solids (TSS)
A measure of the filterable solids present in a sample, as determined by the method specified in 40 CFR Part 136.

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and

maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation using aquatic organism toxicity tests).

USEPA
United States Environmental Protection Agency

Waste
As used in the Ocean Plan, waste includes a Discharger's total discharge, of whatever origin (i.e., gross, not net, discharge).

Water Quality-Based Effluent Limitation (WQBEL)
A value determined by selecting the most stringent of the effluent limitations calculated using all applicable water quality criteria (e.g., aquatic life, human health, and wildlife) for a specific point source to a specific receiving water for a given pollutant.

Water Quality Objectives
Means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

Water Reclamation
The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

WDRs
Waste Discharge Requirements

Whole Effluent Toxicity (WET)
The aggregate toxic effect of an effluent measured directly with a toxicity test.

Attachment A

ATTACHMENT B – MAPS

Figure B-1. Service Area

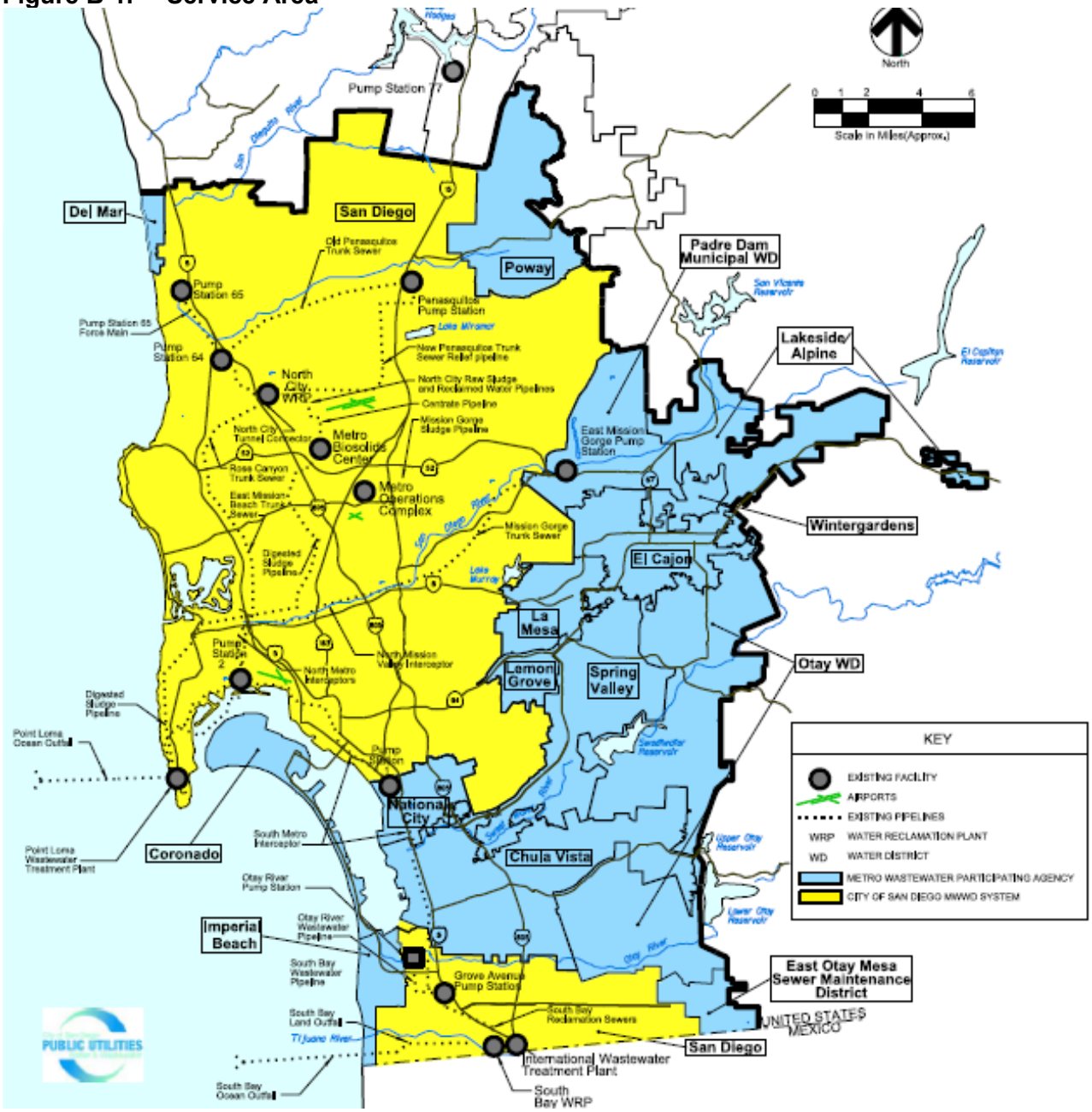


Figure B-2. Facility Location and Outfall Location

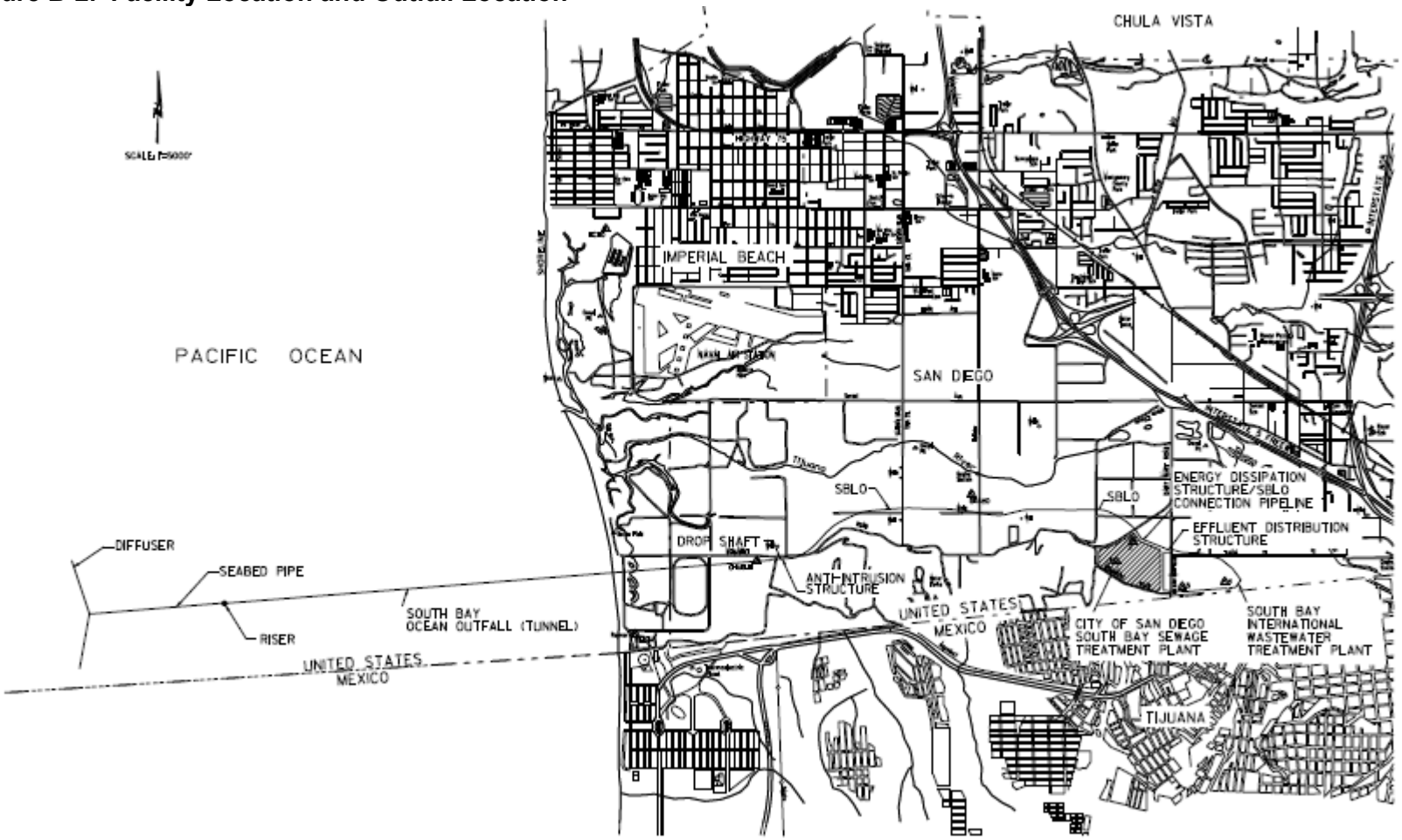
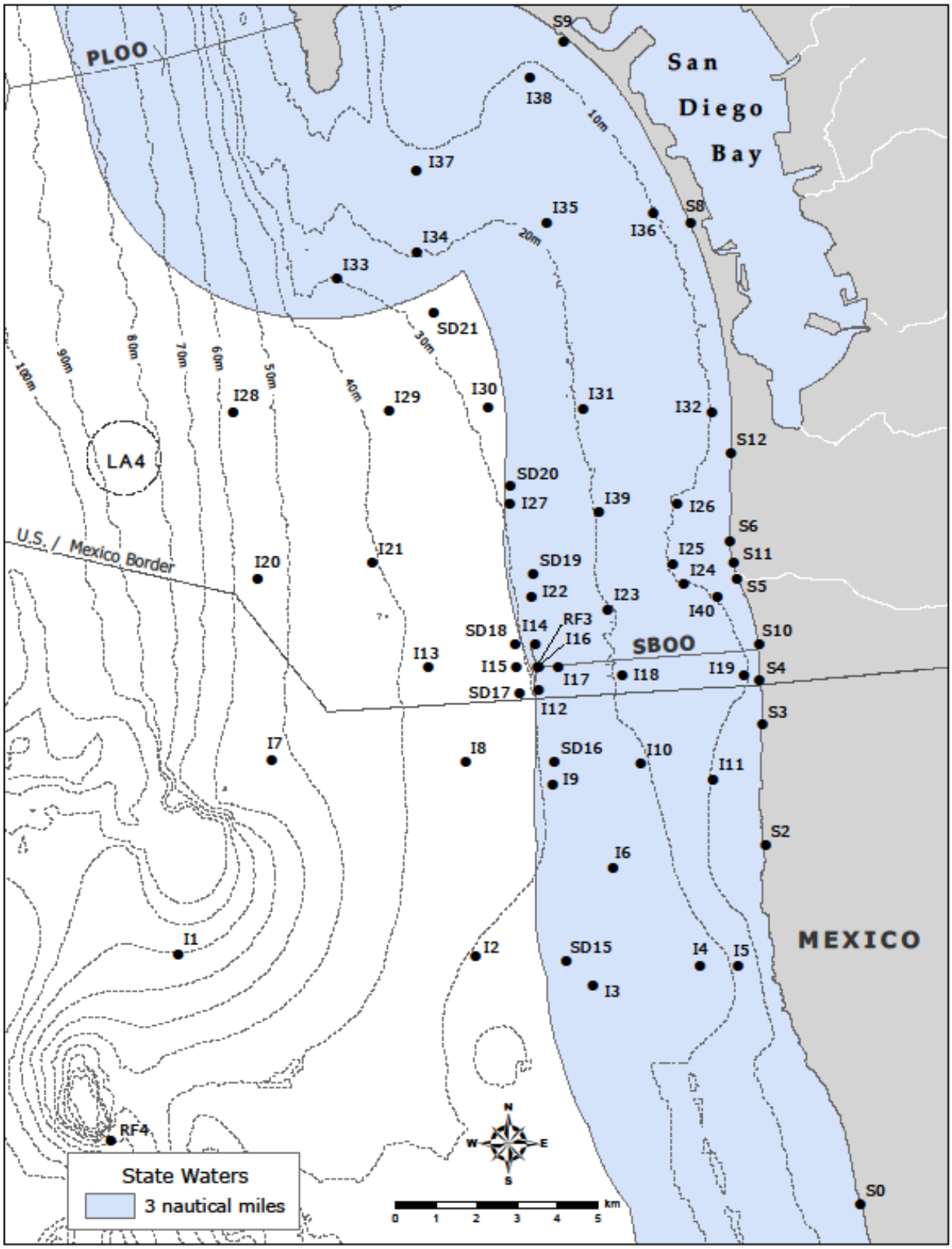
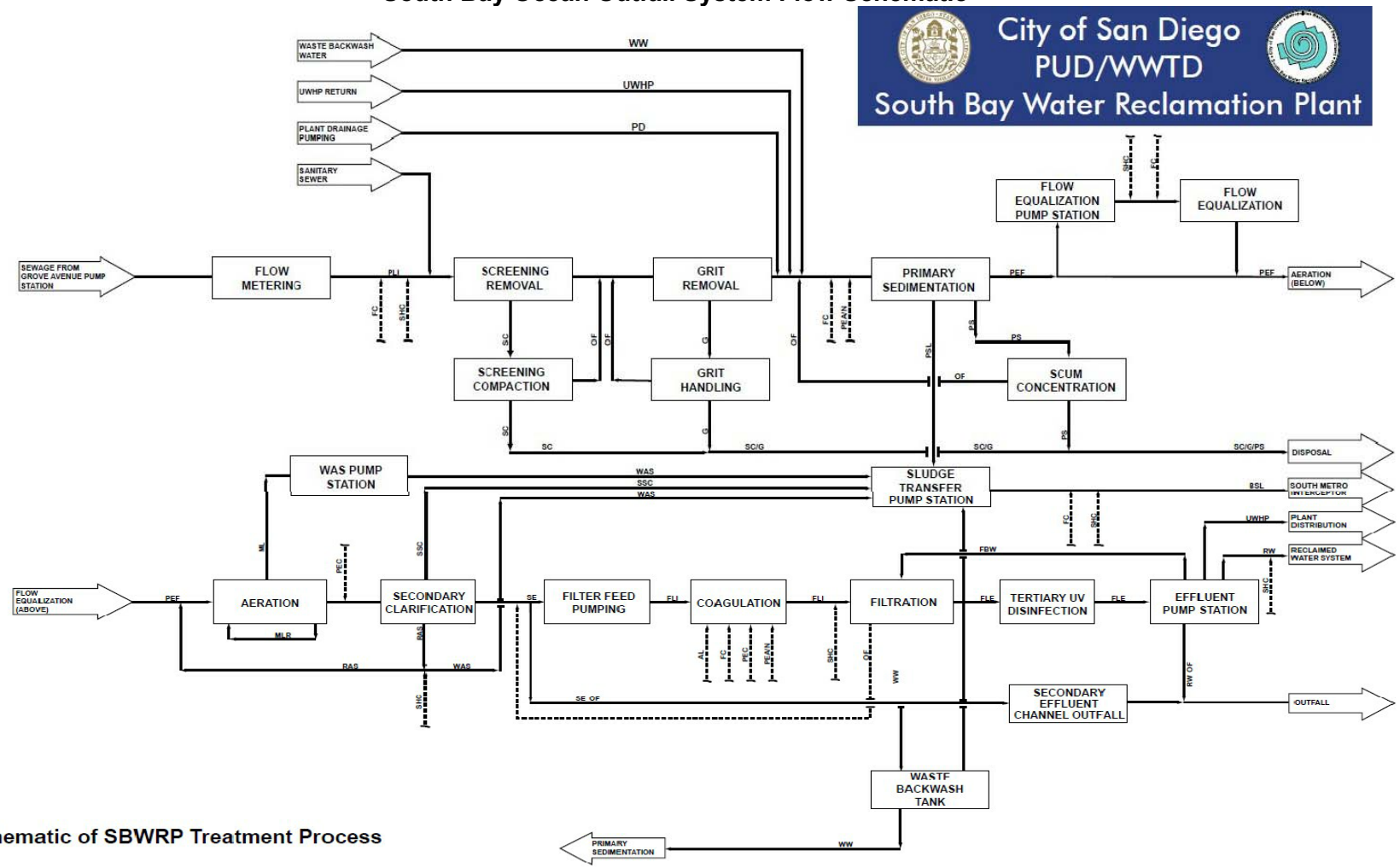


Figure B-3. Receiving Water Monitoring Locations



ATTACHMENT C – FLOW SCHEMATIC

South Bay Ocean Outfall System Flow Schematic



Schematic of SBWRP Treatment Process

SBWRP Flow Chart 2011 V1.9

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

2. 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 or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 CFR 122.41(a)(1))

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a 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. (40 CFR 122.41(c))

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the 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 backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR 122.41(e))

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the San Diego Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR 122.41(i); Water Code, § 13383):

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

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

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

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

G. Bypass

1. Definitions

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

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

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 CFR 122.41(m)(2))

3. Prohibition of bypass. Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):

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

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up

equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the San Diego Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR 122.41(m)(4)(i)(C))

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

5. Notice

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

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR 122.41(m)(3)(ii))

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the 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. (40 CFR 122.41(n)(1))

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR 122.41(n)(2))

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

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

b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

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

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the San Diego Water Board at any time. (40 CFR 122.41(j)(2))

B. Records of monitoring information shall include:

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

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, 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. Upon request, the Discharger shall also furnish to the San Diego Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR 122.41(h); Water Code, § 13267)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR 122.41(k))

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR 122.22(a)(3)).

3. All reports required by this Order and other information requested by the San Diego Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

    a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));

b. 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.) (40 CFR 122.22(b)(2)); and

c. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR 122.22(b)(3))

4. If an authorization under Standard Provisions – Reporting V.B.3 above 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 Standard Provisions – Reporting V.B.3 above must be submitted to the San Diego Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR 122.22(c))

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

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

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR 122.41(l)(4)(i))

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

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

D. Compliance Schedules

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

E. Twenty Four-Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 CFR 122.41(l)(6)(i))

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

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

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

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

F. Planned Changes

The Discharger shall give notice to the San Diego Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR 122.41(l)(1)):

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

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR 122.41(l)(1)(ii))

3. 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 permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR 122.41(l)(1)(iii))

G. Anticipated Noncompliance

The Discharger shall give advance notice to the San Diego Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 CFR 122.41(l)(2))

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR 122.41(l)(7))

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the San Diego Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR 122.41(l)(8))

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The San Diego Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the San Diego Water Board of the following (40 CFR 122.42(b)):

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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Attachment E – Monitoring and Reporting Program (MRP)

Regulations at section 122.48, title 40 of the Code of Federal Regulations (40 CFR 122.48) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (Water Code) sections 13267 and 13383 also authorize the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and State regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitoring discharge. All samples shall be taken at the monitoring points specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the San Diego Water Board. Samples shall be collected at times representative of "worst case" conditions with respect to compliance with the requirement of Order No. R9-2013-0006.

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

C. Monitoring must be conducted according to United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR Part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act* as amended, or unless other test procedures are specified in Order No. R9-2013-0006 and/or in this MRP and/or by the San Diego Water Board.

D. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Public Health or a laboratory approved by the San Diego Water Board.

E. Records of monitoring information shall include information required under Standard Provision, Attachment D, section IV.

F. 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.

G. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. Duplicate chemical analyses must be conducted on a minimum of 10 percent of the samples or at least one sample per month, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples. When requested by USEPA or the San Diego Water Board, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger should have a success rate equal or greater than 80 percent.

H. Analysis for toxic pollutants, including chronic toxicity, with effluent limitations or performance goals based on water quality objectives of the California Ocean Plan, shall be conducted in accordance with procedures described in the California Ocean Plan and restated in this MRP.

I. This permit may be modified in accordance with the requirements set forth at 40 CFR Parts 122 and 124, to include appropriate conditions or limitations to address demonstrated effluent toxicity based on newly available information, or to implement any USEPA approved, new, State water quality standards applicable to effluent toxicity.

II. MONITORING LOCATIONS

A. The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	I-001	At a location where all influent flows to South Bay Water Reclamation Plant (Facility) are accounted for in monitoring events; upstream of any in-plant return flows; and where representative samples of influent can be collected.
001	E-001	Downstream of any in-plant return flows at the Facility where representative samples of effluent treated at the Facility can be collected, prior to commingling with other discharges contributing to the South Bay Ocean Outfall (SBOO).
		~~SURF ZONE~~SHORELINE STATONS
--	S-0	Latitude: 32° 25.148'N; Longitude:117°05.837'W Mexico (Southernmost location)
--	S-2	Latitude: 32° 29.922'N; Longitude:117°07.380'W Mexico (Beach south of El Vigia Restaurant)
--	S-3	Latitude: 32° 31.542'N; Longitude:117°07.440'W Mexico (Beach at end of existing road of Playas de Tijuana)
--	S-4	Latitude: 32° 32.118'N; Longitude:117°07.500'W United States (Beach just north of the border fence)
--	S-5	Latitude: 32° 33.468'N; Longitude:117°07.860'W United States (Beach north of mouth of estuary)
--	S-6	Latitude: 32° 33.978'N; Longitude:117°07.980'W United States (Beach at end of Seacoast Drive)
--	S-8	Latitude: 32°38.208'N; Longitude:117°08.640'W United States (Silver Strand State Beach, Area 4 West of Coronado Cays)
--	S-9	Latitude: 32°40.620'N; Longitude:117°10.680'W United States (Beach at end of Avenida Del Sol seaward of Hotel Del Coronado)
--	S-10	Latitude: 32°32.598'N; Longitude:117°07.500'W United States (Beach at the terminus of Monument Road)
--	S-11	Latitude: 32°33.678'N; Longitude:117°07.920'W United States (Beach approximately ¾ miles north of the mouth of the Tijuana River)
	S-12	Latitude: 32°35.142'N; Longitude:117°07.980'W United States (Beach at the end of Carnation Street)

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
		OFFSHORE STATIONS[1,2]
--	I-1	Latitude: 32°28.400'N; Longitude:117°16.620'W; DEPTH 198 ft (60 m)
--	I-2	Latitude: 32°28.400'N; Longitude:117°11.940'W; DEPTH 106 ft (32 m)
--	I-3	Latitude: 32°28.020'N; Longitude:117°10.080'W; DEPTH 89 ft (27 m)[3]
--	I-4	Latitude: 32°28.300'N; Longitude:117°08.400'W; DEPTH 59 ft (18 m)
--	I-5	Latitude: 32°28.300'N; Longitude:117°07.800'W; DEPTH 46 ft (14 m)[4]
--	I-6	Latitude: 32°29.610'N; Longitude:117°09.780'W; DEPTH 86 ft (26 m)
--	I-7	Latitude: 32°31.000'N; Longitude:117°15.180'W; DEPTH 172 ft (52 m)[5]
--	I-8	Latitude: 32°31.000'N; Longitude:117°12.120'W; DEPTH 118 ft (36 m)[6]
--	I-9	Latitude: 32°30.700'N; Longitude:117°10.740'W; DEPTH 96 ft (29 m)[3]
--	I-10	Latitude: 32°31.000'N; Longitude:117°09.360'W; DEPTH 63 ft (19 m)[7]
--	I-11	Latitude: 32°30.800'N; Longitude:117°08.220'W; DEPTH 43 ft (13 m)[4]
--	I-12	Latitude: 32°31.970'N; Longitude:117°10.980'W; DEPTH 92 ft (28 m)[3]
--	I-13	Latitude: 32°32.250'N; Longitude:117°12.720'W; DEPTH 125 ft (38 m)[6]
--	I-14	Latitude: 32°32.580'N; Longitude:117°11.040'W; DEPTH 92 ft (28 m)[3]
--	I-15	Latitude: 32°32.270'N; Longitude:117°11.340'W; DEPTH 102 ft (31 m)
--	I-16	Latitude: 32°32.270'N; Longitude:117°10.980'W; DEPTH 92 ft (28 m)[3]
--	I-17	Latitude: 32°32.270'N; Longitude:117°10.680'W; DEPTH 83 ft (25 m)
--	I-18	Latitude: 32°32.170'N; Longitude:117°09.660'W; DEPTH 63 ft (19 m)[7]
~~--~~	~~I-19~~	~~Latitude: 32°32.180'N; Longitude:117°07.740'W; DEPTH 33 ft (10 m)~~
--	I-20	Latitude: 32°33.420'N; Longitude:117°15.420'W; DEPTH 182 ft (55 m)[8]
--	I-21	Latitude: 32°33.640'N; Longitude:117°13.620'W; DEPTH 135 ft (41 m)[6]
--	I-22	Latitude: 32°33.200'N; Longitude:117°11.100'W; DEPTH 92 ft (28 m)[3]
--	I-23	Latitude: 32°33.050'N; Longitude:117°09.900'W; DEPTH 69 ft (21 m)[7]
~~--~~	~~I-24~~	~~Latitude: 32°33.400'N; Longitude:117°08.700'W; DEPTH 36 ft (11 m)~~
~~--~~	~~I-25~~	~~Latitude: 32°33.670'N; Longitude:117°08.880'W; DEPTH 30 ft (9 m)~~
~~--~~	~~I-26~~	~~Latitude: 32°34.470'N; Longitude:117°08.820'W; DEPTH 30 ft (9 m)~~
--	I-27	Latitude: 32°34.450'N; Longitude:117°11.460'W; DEPTH 92 ft (28 m)
--	I-28	Latitude: 32°35.630'N; Longitude:117°15.840'W; DEPTH 182 ft (55 m)
--	I-29	Latitude: 32°35.670'N; Longitude:117°13.380'W; DEPTH 125 ft (38 m)
--	I-30	Latitude: 32°35.720'N; Longitude:117°11.820'W; DEPTH 92 ft (28 m)[3]
--	I-31	Latitude: 32°35.730'N; Longitude:117°10.320'W; DEPTH 63 ft (19 m)
~~--~~	~~I-32~~	~~Latitude: 32°35.680'N; Longitude:117°08.280'W; DEPTH 33 ft (10 m)~~
--	I-33	Latitude: 32°37.430'N; Longitude:117°14.220'W; DEPTH 99 ft (30 m)[3]
--	I-34	Latitude: 32°37.800'N; Longitude:117°12.960'W; DEPTH 63 ft (19 m)
--	I-35	Latitude: 32°38.200'N; Longitude:117°10.920'W; DEPTH 63 ft (19 m)
--	I-36	Latitude: 32°38.350'N; Longitude:117°09.240'W; DEPTH 36 ft (11 m)[4]
--	I-37	Latitude: 32°38.880'N; Longitude:117°12.980'W; DEPTH 40 ft (12 m)[4]
--	I-38	Latitude: 32°40.130'N; Longitude:117°11.200'W; DEPTH 36 ft (11 m)[4]
~~--~~	~~I-39~~	~~Latitude: 32°34.340'N; Longitude:117°10.050'W; DEPTH 59 ft (18 m)~~

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
~~--~~	~~I-40~~	~~Latitude: 32°33.230'N; Longitude:117°08.170'W; DEPTH 33 ft (10 m)~~
KELP/NEARSHORE STATIONS		
--	I-19	Latitude: 32°32.180'N; Longitude:117°07.740'W; DEPTH 33 ft (10 m)[4]
--	I-24	Latitude: 32°33.400'N; Longitude:117°08.700'W; DEPTH 36 ft (11 m)[4]
--	I-25	Latitude: 32°33.670'N; Longitude:117°08.880'W; DEPTH 30 ft (9 m)[9]
--	I-26	Latitude: 32°34.470'N; Longitude:117°08.820'W; DEPTH 30 ft (9 m)[9]
--	I-32	Latitude: 32°35.680'N; Longitude:117°08.280'W; DEPTH 33 ft (10 m)[9]
--	I-39	Latitude: 32°34.340'N; Longitude:117°10.050'W; DEPTH 59 ft (18 m)[7]
--	I-40	Latitude: 32°33.230'N; Longitude:117°08.170'W; DEPTH 33 ft (10 m)[9]
TRAWL STATIONS		
--	SD-15	Latitude: 32°28.350'N; 117°10.500'W; DEPTH: 89 ft (27 m)
--	SD-16	Latitude: 32°31.000'N; 117°10.720'W; DEPTH: 89 ft (27 m)
--	SD-17	Latitude: 32°32.200'N; 117°11.430'W; DEPTH: 99 ft (30 m)
--	SD-18	Latitude: 32°32.580'N; 117°11.350'W; DEPTH: 99 ft (30 m)
--	SD-19	Latitude: 32°33.500'N; 117°11.080'W; DEPTH: 92 ft (28 m)
--	SD-20	Latitude: 32°34.680'N; 117°11.450'W; DEPTH: 96 ft (29 m)
--	SD-21	Latitude: 32°36.990'N; 117°12.690'W; DEPTH: 96 ft (29 m)
RIG FISHING STATIONS		
--	RF-3	Latitude: 32°32.270'N; 117°11.000'W; DEPTH: 89 ft (27 m)
--	RF-4	Latitude: 32°25.910'N; 117°17.655'W; DEPTH: 89 ft (27 m)

1. All 40 offshore and kelp/nearshore stations designated I-1 to I-40 are monitored for visual observations, temperature, depth, pH, salinity, dissolved oxygen, light transmittance, and chlorophyll-a as indicated in Table E-7.
2. A total of 28 of the above offshore and kelp/nearshore stations are also monitored for total coliforms, fecal coliforms, and Enterococcus as indicated in Table E-7. These stations include I-3, I-5, I-7 to I-14, I-16, I-18 to I-26, I-30, I-32, I-33, and I-36 to I-40.
3. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 27m.
4. Discrete depths for fecal indicator bacteria samples include: 2m, 6m, and 11m.
5. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 52m.
6. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 37m.
7. Discrete depths for fecal indicator bacteria samples include: 2m, 12m, and 18m.
8. Discrete depths for fecal indicator bacteria samples include: 2m, 18m, and 55m.
9. Discrete depths for fecal indicator bacteria samples include: 2m, 6m, and 9m.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location I-001

1. The Discharger shall monitor the influent at Monitoring Location I-001. Influent samples shall be collected on the same day as, and shortly before the collection of effluent samples. Influent shall be monitored as follows.

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous	--
Biochemical Oxygen Demand (5-day @ 20°C) (BOD_5)	mg/L	24-hr Composite	1/Week	[1]
Total Suspended Solids (TSS)	mg/L	24-hr Composite	1/Week	[1]
Arsenic, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Chromium (VI) , Total Recoverable[2]	µg/L	24-hr Composite	1/Month	[1]
Cyanide, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Lead, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Silver, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Month	[1]

1. As required under 40 CFR Part 136.

~~1.~~2. The Discharger may, at their option, monitor for total recoverable chromium in lieu of total recoverable chromium (VI).

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location E-001

1. The Discharger shall monitor the effluent at Monitoring Location E-001, as follows.

Table E-3. Effluent Monitoring at E-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous[1]	--
BOD_5	mg/L	24-hr Composite	1/Day[3,10]	[2]
TSS	mg/L	24-hr Composite	1/Day[3,10]	[2]
pH	pH Units	Grab	1/Day[10]	[2]
Oil and Grease	mg/L	Grab	1/Week[3]	[2]
Settleable Solids	mL/L	Grab	1/Week	[2]
Turbidity	NTU	24-hr Composite	1/Week	[2]
Dissolved Oxygen	mg/L	Grab	1/Week	[2]
Temperature	°F	Grab	1/Week	[2]
TABLE B PARAMETERS FOR PROTECTION OF MARINE AQUATIC LIFE				
Arsenic, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Cadmium, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Chromium (VI), Total Recoverable[5]	µg/L	24-hr Composite	1/Month[3,4]	[2]
Copper, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Lead, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Mercury, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Nickel, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Selenium, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Silver, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Zinc, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2]
Cyanide, Total Recoverable	µg/L	24-hr Composite	1/Month[3,4]	[2,6]
Chlorine, Total Residual[7]	µg/L	Grab	1/Week[3,4]	[2]
Ammonia Nitrogen, Total (as N)	mg/L	24-hr Composite	1/Month[3,4]	[2]
Phenolic Compounds (nonchlorinated)[8]	µg/L	24-hr Composite	1/Month[3,4]	[2]
Phenolic Compounds (chlorinated)[9]	µg/L	24-hr Composite	1/Month[3,4]	[2]
Endosulfan	µg/L	24-hr Composite	1/Month[3,4]	[2]
Endrin	µg/L	24-hr Composite	1/Month[3,4]	[2]
HCH	µg/L	24-hr Composite	1/Month[3,4]	[2]
Radioactivity	pCi/L	24-hr Composite	1/Month[3,4]	[2]
TABLE B PARAMETERS FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS				
Acrolein	µg/L	Grab	1/Quarter[3,4]	[2]
Antimony, Total Recoverable	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Bis (2-chloroethoxy) Methane	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Bis (2-chloroisopropyl) Ether	µg/L	Grab	1/Quarter[3,4]	[2]
Chlorobenzene	µg/L	Grab	1/Quarter[3,4]	[2]
Chromium (III), Total Recoverable[5]	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Di-n-butyl Phthalate	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Dichlorobenzenes	µg/L	Grab	1/Quarter[3,4]	[2]
Diethyl Phthalate	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Dimethyl Phthalate	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
4,6-dinitro-2-methylphenol	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
2,4-dinitrophenol	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Ethylbenzene	µg/L	Grab	1/Quarter[3,4]	[2]
Fluoranthene	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Hexachlorocyclopentadiene	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Nitrobenzene	µg/L	Grab	1/Quarter[3,4]	[2]
Thallium, Total Recoverable	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Toluene	µg/L	Grab	1/Quarter[3,4]	[2]
Tributyltin	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
1,1,1-trichloroethane	µg/L	Grab	1/Quarter[3,4]	[2]
TABLE B PARAMETERS FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS				
Acrylonitrile	µg/L	Grab	1/Quarter[3,4]	[2]
Aldrin	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Benzene	µg/L	Grab	1/Quarter[3,4]	[2]
Benzidine	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Beryllium, Total Recoverable	µg/L	24-hr composite	1/Quarter[3,4]	[2]

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Bis (2-chloroethyl) Ether	µg/L	Grab	1/Quarter[3,4]	[2]
Bis (2-ethlyhexyl) Phthalate	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Carbon Tetrachloride	µg/L	Grab	1/Quarter[3,4]	[2]
Chlordane	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Chlorodibromomethane	µg/L	Grab	1/Quarter[3,4]	[2]
Chloroform	µg/L	Grab	1/Quarter[3,4]	[2]
DDT	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
1,4-dichlorobenzene	µg/L	Grab	1/Quarter[3,4]	[2]
3,3'-dichlorobenzidine	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
1,2-dichloroethane	µg/L	Grab	1/Quarter[3,4]	[2]
1,1-dichloroethylene	µg/L	Grab	1/Quarter[3,4]	[2]
Dichlorobromomethane	µg/L	Grab	1/Quarter[3,4]	[2]
Dichloromethane	µg/L	Grab	1/Quarter[3,4]	[2]
1,3-dichloropropene	µg/L	Grab	1/Quarter[3,4]	[2]
Dieldrin	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
2,4-dinitrotoluene	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
1,2-diphenylhydrazine	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Halomethanes	µg/L	Grab	1/Quarter[3,4]	[2]
Heptachlor	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Heptachlor Epoxide	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Hexachlorobenzene	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Hexachlorobutadiene	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Hexachloroethane	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Isophorone	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
N-nitrosodimethylamine	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
N-nitrosodi-N-propylamine	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
N-nitrosodiphenylamine	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
PAHs	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
PCBs	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
TCDD equivalents	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
1,1,2,2-tetrachloroethane	µg/L	Grab	1/Quarter[3,4]	[2]
Tetrachloroethylene	µg/L	Grab	1/Quarter[3,4]	[2]
Toxaphene	µg/L	24-hr Composite	1/Quarter[3,4]	[2]
Trichloroethylene	µg/L	Grab	1/Quarter[3,4]	[2]
1,1,2-trichloroethane	µg/L	Grab	1/Quarter[3,4]	[2]
2,4,6-trichlorophenol	µg/L	Grab	1/Quarter[3,4]	[2]
Vinyl Chloride	µg/L	Grab	1/Quarter[3,4]	[2]

[1] Report the total daily effluent flow and the monthly average effluent flow.

[2] As required under 40 CFR Part 136.

[3] The Discharger shall calculate and report the mass emission rate (MER) of the constituent for each sample taken. The MER shall be calculated in accordance with section VII.I.2.d of this Order.

[4] The minimum frequency of monitoring for this constituent is automatically increased to twice the minimum frequency specified, if any analysis for this constituent yields a result higher than the applicable effluent limitation or performance goal specified in this Order. The increased minimum frequency of monitoring shall

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method

remain in effect until the results of a minimum of four consecutive analyses for this constituent are below all applicable effluent limitations or performance goals specified in this Order.

5 The Dischargers may, at their option, apply this performance goal as a total chromium performance goal and monitor for total recoverable chromium in lieu of total recoverable chromium (III) or total recoverable chromium (VI).

6 If a Discharger can demonstrate to the satisfaction of the San Diego Water Board (subject to USEPA 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 metals cyanides, and weakly complexed organometallic cyanide complexes. In order for the analytical method to be acceptable, the recovery of free cyanide from metal complexes must be comparable to that achieved by the approved method in 40 CFR Part 136, as revised May 14, 1999.

7 Monitoring of total chlorine residual is not required on days when none of the treatment units that are subject to this Order use 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 that samples are collected, and the time at which samples are collected, shall be reported.

8 Non-chlorinated phenolic compounds represent the sum of 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 4-nitrophenol, and phenol.

9 Chlorinated phenolic compounds represent the sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

10 Five days per week except seven days per week for at least one week dur ing July or August of each year.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The Discharger shall conduct chronic toxicity testing on effluent samples collected at Effluent Monitoring Station E-001 in accordance with the following schedule and requirements:

Table E-4. Whole Effluent Toxicity Testing

Monitoring Location	Test	Unit	Sample Type	Minimum Test Frequency
E-001	Screening period for chronic toxicity	TU_c	24-hr Composite	Every other year for 3 months, beginning with the calendar year 2012
	Chronic Toxicity	TU_c	24-hr Composite	1/Quarter

Acute toxicity testing shall be performed using either a marine fish or invertebrate species in accordance with procedures established by the USEPA guidance manual, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, 5th Edition, October 2002 (EPA-821-R-02-012).

Critical life stage toxicity tests shall be performed to measure chronic toxicity. Testing shall be performed using methods outlined in *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine Estuarine Organisms (*Chapman, G.A., D.L. Denton, and J.M. Lazorchak, 1995) or *Procedures Manual for Conducting Toxicity Tests Developed by the Marine Bioassay Project* (State Water Board, 1996).

A screening period for chronic toxicity shall be conducted every other year, beginning with the calendar year 2012. Each screening period shall consist of 3 consecutive months of WET tests,

using a minimum of three test species with approved test protocols, from the following list (from the Ocean Plan). Repeat screening periods may be terminated after the first month if the most sensitive species is the same as the species previously found to be most sensitive. Other tests may be used, if they have been approved for such testing by the State Water Board. The test species shall include a fish, an invertebrate, and an aquatic plant. After the screening period, the most sensitive test species shall be used for the quarterly testing. Control and dilution water should be receiving water or lab water as appropriate. If the dilution water is different from the culture water, then culture water should be used in a second control. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay test and reported with test results.

Table E-5. Approved Test for Chronic Toxicity

Species	Test	Tier [1]	Reference [2]
giant kelp, *Macrocystis pyrifera*	percent germination; germ tube length	1	a, c
red abalone, *Haliotis rufescens*	abnormal shell development	1	a, c
oyster, *Crassostrea gigas*; mussels, *Mytilus spp*.	abnormal shell development; percent survival	1	a, c
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent normal development	1	a, c
urchin, *Strongylocentrotus purpuratus*; sand dollar, *Dendraster excentricus*	percent fertilization	1	a, c
Mysid shrimp, *Holmesimysis costata*	percent survival; growth	1	a, c
Mysid shrimp, *Mysidopsis bahia*	percent survival; fecundity	2	b, d
topsmelt, *Atherinops affinis*	larval growth rate; percent survival	1	a, c
Silversides, *Menidia beryllina*	larval growth rate; percent survival	2	b, d

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

[2] Protocol References:

a. Chapman, G.A., D.L. Denton, and J.M. Lazorchak. 1995. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. USEPA Report No. EPA/600/R-95/136.

b. Klemm, D.J., G.E. Morrison, T.J. Norberg-King, W.J. Peltier, and M.A. Heber. 1994. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Marine and Estuarine Organisms. USEPA Report No. EPA-600-4-91-003.

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

d. Weber, C.I., W.B. Horning, I.I., D.J. Klemm, T.W. Nieheisel, P.A. Lewis, E.L. Robinson, J. Menkedick and F. Kessler 9eds). 1998. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-87/028. National Information Service, Springfield, VA.

If the performance goal for chronic is exceeded in any one test at Monitoring Location E-001, then the Discharger shall comply with Section VI.C.2.c, Toxicity Reduction Requirements, in this Order.

If no toxicity is detected in any of these additional six tests, then the Discharger may return to the testing frequency specified in the MRP.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS ~~– SURFACE WATER~~

The receiving water and sediment monitoring requirements set forth below are designed to measure the effects of the SBOO discharge on the receiving ocean waters. ~~These monitoring requirements will remain in effect on an interim basis, pending development of a new and updated monitoring and assessment program.~~ The overall receiving water monitoring program is intended to answer the following questions:

(1) Does the receiving water meet water quality standards?

(2) Are the receiving water conditions getting better or worse over time?

(3) What is the relative contribution of the Facility discharge to pollution in the receiving water?

~~At this time, r~~Receiving water and sediment monitoring in the vicinity of the SBOO shall be conducted as specified below. This program is intended to document conditions within the waste field in the vicinity of the ~~"Zone of Initial Dilution"~~zone of initial dilution (ZID) boundary, at reference stations, and at areas beyond the ZID where discharge impacts might be reasonably expected. Station location, sampling, sample preservation and analyses, when not specified, shall be by methods approved by the San Diego Water Board. The monitoring program may be modified by the San Diego Water Board at any time. The Discharger may also submit a list of proposed changes with supporting~~, and~~ rationale ~~for. any reductions in, or other changes,~~ to these monitoring requirements that it considers to be appropriate to the San Diego Water Board for approval.

The receiving water and sediment monitoring program for the SBOO may be conducted jointly with other dischargers to the SBOO.

During monitoring events sample stations shall be located using a land-based microwave positioning system or a satellite positioning system such as global positioning system (GPS)~~GPS~~. If an alternate navigation system is proposed, its accuracy should be compared to that of microwave and satellite based systems, and any compromises in accuracy shall be justified.

In the event that the Discharger is unable to obtain a sample from a monitoring station(s) located in Mexico, due to safety, legal, or other reasons, collection of samples at such station(s) can be omitted. In the event that a monitoring location is omitted, the Discharger shall submit a statement to the San Diego Water Board containing, at a minimum, the following information:

1. The monitoring station(s) that was omitted;
2. The date the monitoring station was omitted; and
3. A description of the circumstances for omitting the collection of data at the monitoring station.

A. ~~Surf Zone~~Shoreline Water Quality Monitoring Requirements

As ocean surface waves come closer to shore they break, forming the foamy, bubbly surface called surf. The region of breaking waves defines the ~~surf zone~~shoreline.

Monitoring of the ~~surf zone~~shoreline is intended to answer the following questions:

(1) Does the effluent cause or contribute to an exceedance of the water quality standards in the receiving water?

(2) Does the effluent reach water contact zones or commercial shellfish beds?

(3) Are densities of bacteria in water contact areas below levels protective of public health?

All ~~surf zone~~shoreline stations shall be monitored as follows:

Table E-6. Shoreline ~~Surf Zone~~ Monitoring Requirements[2]

Parameter	Units	Stations	Sample Type	Sampling Frequency
Visual Observations	--	S0, S2-S6, S8-S12	Visual	[1]
Temperature	°C	S0, S2-S6, S8-S12	Grab	1/Week~~ly~~
Total and Fecal Coliforms; Enterococcus[2,3]	colony forming units (CFU)/100 mL	S0, S2-S6, S8-S12	Grab	1/Week~~ly~~

1 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, discoloration, oil and grease, turbidity, and odor shall be recorded. These observations shall be taken whenever a sample is collected. Visual observations shall also be conducted for repeat sampling.

2. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.~~The geometric mean shall be calculated using the five most recent sample results from each site.~~

3. If a single sample exceeds any of the single sample maximum (SSM) bacterial standards contained in section V.A.1.a of this Order, repeat sampling at that location shall be conducted to determine the extent and persistence of the exceedance. Repeat sampling shall be conducted within 24 hours of receiving analytical results and continued until the sample result is less than the SSM standard or until a sanitary survey is conducted to determine the source of the high bacterial densities.

~~Single Sample Maximum bacterial standards include:~~

~~i. Total coliform density shall not exceed 10,000 per 100 mL; or~~

~~ii. Fecal coliform density shall not exceed 400 per 100 mL; or~~

~~iii. Total coliform density shall not exceed 1,000 per 100 mL when the ratio of fecal/total coliform exceeds 0.1;~~

~~iv. Enterococcus density shall not exceed 104 per 100 mL.~~

When repeat sampling is required because of an exceedance of any one single sample density, values from all samples collected during that 30-day period will be used to calculate the geometric mean. Repeat sampling is not required for the stations located in Mexico.

Sample Station Omission Due to Storm Condition (including required repeat sampling). In the event of stormy weather which makes sampling hazardous at certain ~~surf zone~~shoreline stations, collection of samples at such stations can be omitted, provided that such omissions do not occur more than 5 days in any calendar year or occur at consecutive sampling times, or provided that a written request from the Discharger is approved by the Executive Officer in writing. The visual observations listed in footnote no. 1 above shall still be recorded and reported to the San Diego Water Board for these stations at the time the sample was attempted to be collected. If practicable, an effort should be made to return to the sampling station that was omitted and collect the sample during calmer conditions within the same reporting period.

B. Offshore Water Quality Monitoring Requirements

Offshore monitoring extends from south of the international border to Point Loma. See Attachment B for a map of the offshore monitoring stations.

Offshore monitoring is necessary to answer the following questions:

(1) Is natural light significantly reduced at any point outside the ~~zone of initial dilution~~ZID as a result of the discharge?

(2) Does the discharge cause a discoloration of the ocean surface?

(3) Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than 10 percent from that which occurs naturally outside the ZID?

(4) Does the discharge of waste cause the pH to change at any time more than 0.2 units from that which occurs naturally outside the ZID?

(5) Is the wastewater plume encroaching upon receiving water areas used for swimming, surfing, diving and shellfish harvesting?

(6) What is the fate of the discharge plume?

1. Offshore receiving water monitoring shall be conducted as follows:

~~Table E-7 Offshore Monitoring Requirements~~

~~Parameter~~	~~Units~~	~~Stations~~	~~Sample Type~~	~~Sampling Frequency~~
~~Visual Observations[1]~~	~~--~~	~~I1 to I40~~	~~Visual~~	~~[1]~~
~~Conductivity, Temperature, and Depth[2]~~	~~Practical Salinity Units, °C, feet~~	~~I1 to I40~~	~~Profile~~	~~Quarterly~~
~~pH[2]~~	~~units~~	~~I1 to I40~~	~~Profile~~	~~Quarterly~~
~~Salinity[2]~~	~~ppt~~	~~I1 to I40~~	~~Profile~~	~~Quarterly~~
~~Dissolved Oxygen[2]~~	~~mg/L~~	~~I1 to I40~~	~~Profile~~	~~Quarterly~~
~~Light Transmittance[2]~~	~~Percent~~	~~I1 to I40~~	~~Profile~~	~~Quarterly~~
~~Oil and Grease[3]~~	~~mg/L~~	~~I3, I5, I7 to I14, I16, I18 to I26, I30, I32, I33, I36 to I40~~	~~Grab~~	~~Quarterly~~
~~Total Suspended Solids[4]~~	~~mg/L~~	~~I3, I5, I7 to I14, I16, I18 to I26, I30, I32, I33, I36 to I40~~	~~Grab~~	~~Quarterly~~
~~Total and Fecal Coliforms; Enterococcus[5]~~	~~CFU/100 mL~~	~~I3, I5, I7 to I14, I16, I18 to I24, I30, I32, I33, I36 to I38, and I40~~	~~Grab~~	~~Quarterly~~
~~Total and Fecal Coliforms; Enterococcus[6]~~	~~CFU/100 mL~~	~~I19, I24, I25, I26, I32, I39, I40~~	~~Grab~~	~~Weekly~~

~~1 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.~~

~~2 Conductivity, temperature, depth, salinity, dissolved oxygen, light transmittance, and pH shall be measured quarterly throughout the entire water column. Suspended solids and light transmittance measurements shall be taken on the same day and as close together in time as possible.~~

~~3 Oil and grease shall be measured quarterly in the top five feet of surface water.~~

~~4 TSS shall be measured quarterly at three depths (sub-surface, mid-depth, and bottom).~~

~~5 Total and fecal coliform and enterococcus shall be sampled at least quarterly at 25 offshore stations from three depths (sub-surface, mid-depth, and bottom).~~

~~6 Total and fecal coliform and enterococcus shall be sampled at three kelp bed stations and four other nearshore stations along the 9-m depth contour (I19, I24, I25, I26, I32, I39, and I40) 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). Monitoring for stations I19, I24, I32, and I40 shall be effective January 1, 2015.~~

Table E-7. Offshore and Kelp/Nearshore Monitoring Requirements

Parameter	Units	Sample Type	Sampling Frequency[1,2]	
			Offshore	Kelp/Nearshore
Visual Observations	--	Visual	[3]	[3]
Temperature and Depth[4]	°C, feet	Profile	1/Quarter	1/Week
pH[4]	units	Profile	1/Quarter	1/Week
Salinity[4]	parts per thousand	Profile	1/Quarter	1/Week
Dissolved Oxygen[4]	mg/L	Profile	1/Quarter	1/Week
Light Transmittance[4]	Percent	Profile	1/Quarter	1/Week
Chlorophyll a[4]	ug/L	Profile	1/Quarter	1/Week
Total Coliforms	CFU/100 mL	Grab	1/Quarter	1/Week
Fecal Coliforms	CFU/100 mL	Grab	1/Quarter	1/Week
Enterococcus	CFU/100 mL	Grab	1/Quarter	1/Week

1 Quarterly receiving water monitoring results shall be submitted within the monthly SMR for the month in which the monitoring was conducted.

2 Shall be monitored at all applicable discrete depths specified for bacterial monitoring in Table E-1 of this MRP.

3 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.

4 Temperature, depth, pH, salinity, dissolved oxygen, light transmittance, and chlorophyll a profile data shall be measured throughout the entire water column during the quarterly and weekly sampling events.

Sample Station Omission Due to Storm Condition. In the event of stormy weather which makes sampling hazardous at certain offshore stations, collection of samples at such stations can be omitted, provided that such omissions do not occur more than 5 days in any calendar year or occur at consecutive sampling times, or provided that a written request from the Discharger is approved by the Executive Officer in writing. ~~.~~ The visual observations listed in footnote no. 1 above shall still be recorded and reported to the San Diego Water Board for these stations at the time the sample was attempted to be collected. If practicable, an effort should be made to return to the sampling station that was omitted and collect the sample during calmer conditions within the same reporting period.

2. Plume Tracking

a. Plume Tracking Monitoring Plan (PTMP). By March 30, 2018, the Discharger shall, in consultation with the San Diego Water Board, prepare and submit a PTMP to implement an ongoing program designed to map dispersion and fate of the

wastewater plume discharged from the SBOO. The PTMP shall include, but is not limited to, the following elements.

i. Installation and operation by the Discharger of a permanent, real-time oceanographic mooring system located near the terminal diffuser wye structure of the SBOO. The mooring system shall be designed to measure, at minimum, direction and velocity of subsurface currents, and ocean stratification.

ii. Development of a work plan or pilot study (special study) for implementation of the SBOO real-time mooring system, including data acquisition and processing.

iii. Networking the SBOO system to be compatible with a similar system being deployed by the Discharger near the Point Loma Ocean Outfall (PLOO) discharge site, as well as a third system operated by the University of California San Diego, Scripps Institution of Oceanography in the coastal waters off the City of Del Mar.

iv. Development of a work plan or pilot study (special study) for utilizing advanced oceanographic sampling technologies such as an autonomous underwater vehicle (AUV) or remotely operated towed vehicle (ROTV) in conjunction with the SBOO real-time mooring system to enhance collection of water quality data in real-time and provide higher resolution maps of plume location and movement.

b. Plume Tracking Implementation. The Discharger shall implement the PTMP within sixty (60) days after submission in accordance with the scheduled contained in the PTMP unless otherwise directed by the San Diego Water Board.

~~a.~~c. Plume Tracking Reporting. The Discharger shall submit reports to the San Diego Water Board on the SBOO real-time mooring system and associated pilot studies (e.g., AUV/ROTV surveys) biennially in accordance with the due dates specified in Table E-10 for the Biennial Receiving Waters Monitoring and Assessment Report. These reports shall include in-depth discussion, evaluation, interpretation, and tabulation of the real-time mooring and other project data. Report interpretations and conclusions shall include the state of the receiving waters into which the SBOO discharges and the estimated location of the SBOO plume throughout the reporting period, Additional project progress reports may also be required per approved work plan schedules.

C. Benthic ~~Community Protection~~ Monitoring Requirements

~~Sediments~~ Seafloor sediments integrate constituents that are discharged to the ocean. Most particles that come from the SBOO discharge, and any associated contaminants, will eventually settle to the seafloor where they are incorporated into the existing sediments. Sediments can accumulate these particles over the years until the point where sediment quality is degraded and beneficial uses are impaired.

Benthic organisms are strongly affected by sediment contaminant exposure because these organisms often live in continual direct contact with sediment/pore water, and many species ingest significant quantities of sediment as a source of nutrition. Because the benthos are dependent on their surroundings, they serve as a biological indicator that reflects the overall conditions of the aquatic environment.~~The benthic community is strongly affected by sediment composition and quality and water quality. Because the benthos are dependent on their surroundings, they serve as a biological indicator that reflects the overall conditions of the aquatic environment.~~

The assessment of sediment quality with respect to sediment chemistry, sediment toxicity and benthic community condition is necessary to answer the following questions:~~Sediment and benthic monitoring is necessary to answer the following question:~~

(1) Is the dissolved sulfide concentration of waters in sediments significantly increased above that present under natural conditions?

(2) Is the concentration of substances, set forth in Table 1 of the Ocean Plan for protection of marine aquatic life, in marine sediments at levels which would degrade the benthic community?

(3) Is the concentration of organic pollutants in marine sediments at levels that would degrade the benthic community?

(4) Are benthic communities degraded as a result of the discharge?

(5) Is the sediment quality changing over time?

The assessment of sediment quality to evaluate potential effects of the SBOO discharge and compliance with narrative water quality standards specified in the Ocean Plan consist of the measurement and integration of three lines of evidence: 1) physical and chemical properties of seafloor sediments, 2) seafloor sediment toxicity to assess bioavailability and toxicity of sediment contaminants, and 3) ecological status of the biological communities (benthos) that live in or on the seafloor sediments.

1. **Sediment Assessment for Physical and Chemical Properties~~Chemistry~~**

~~a. **Sediment Characteristics.** The physical and chemical properties of seafloor sediments and the ecological status of the biological communities (benthos) that live in or on these sediments are monitored to evaluate potential effects of the SBOO discharge and compliance with narrative water quality standards specified in the Ocean Plan.~~

~~b.~~a. **Sediment Sampling Stations and Monitoring Frequency.** The core sediment monitoring program is designed to assess spatial and temporal trends at 27 of the offshore stations listed in Table E-1, including 12 primary stations located along the outfall discharge depth contour (i.e., stations I2, I3, I6, I9, I12, I14, I15, I16, I22, I27, I30, I33) and 15 secondary stations located at other depths (i.e., stations I1, I4, I7, I8, I10, I13, I18, I20, I21, I23, I28, I29, I31, I34, I35). At the discretion of the San Diego Water Board, the requirement for sampling the secondary stations may be relaxed to allow Discharger participation in Southern California Bight ~~regional~~ Regional ~~monitoring~~ Monitoring efforts, or to reallocate resources to accommodate approved Strategic Process Studies. Sediment samples shall be collected twice per year during the Winter (e.g., January) and Summer (e.g., July) at each of the 27 offshore stations described above and ~~at the locations specified~~ in Table E-1 in order to assess benthic habitat condition in terms of physical and chemical composition (e.g., grain-size distribution, sediment chemistry).

~~c.~~b. **Sediment Sample Collection Methods.** Sediment samples shall be taken using a 0.1-square meter modified Van Veen grab sampler. Samples for grain-size and chemical analyses shall be collected from within the upper two centimeters of the surface sediment. Bulk sediment chemical analysis shall include at a minimum~~taken from the top 2 centimeters of the grab and analyzed for~~ the set of constituents listed in Table E-8 below.

c. **Sediment Chemistry.~~Sediment Analysis.~~** Sediment chemistry is the measurement of the concentration of chemicals of concern in sediments. The chemistry line of evidence

is used to assess the potential overall exposure risk to benthic organisms from pollutants in surficial sediments. Chemical analysis of sediment shall be conducted using USEPA approved methods, methods developed by the National Oceanic and Atmospheric Administration's (NOAA's) *National Status and Trends for Marine Environmental Quality*, or methods developed in conjunction with the Southern California Bight Regional Monitoring Program. For chemical analysis of sediment, samples shall be reported on a dry weight basis.~~Chemical analysis of sediment shall be conducted using USEPA approved methods, methods developed by the National Oceanic and Atmospheric Administration's (NOAA's) National Status and Trends for Marine Environmental Quality, or methods developed in conjunction with the Southern California Bight Regional Monitoring Program. For chemical analysis of sediment, samples shall be reported on a dry weight basis.~~

Sediment monitoring for physical and chemical properties shall be conducted at the 27 offshore benthic stations listed above in section VIII.C.1.a of this MRP as follows:

Table E-8. Sediment Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Sediment grain size	µm	Grab	2/Year
Total Organic Carbon	Percent	Grab	2/Year
Total Nitrogen	Percent	Grab	2/Year
Acid Volatile Sulfides	mg/kg	Grab	2/Year
Aluminum	mg/kg	Grab	2/Year
Antimony	mg/kg	Grab	2/Year
Arsenic	mg/kg	Grab	2/Year
Cadmium	mg/kg	Grab	2/Year
Chromium	mg/kg	Grab	2/Year
Copper	mg/kg	Grab	2/Year
Iron	mg/kg	Grab	2/Year
Lead	mg/kg	Grab	2/Year
Manganese	mg/kg	Grab	2/Year
Mercury	mg/kg	Grab	2/Year
Nickel	mg/kg	Grab	2/Year
Selenium	mg/kg	Grab	2/Year
Silver	mg/kg	Grab	2/Year
Tin	mg/kg	Grab	2/Year
Zinc	mg/kg	Grab	2/Year
PCBs	ng/kg	Grab	2/Year
2,4-DDD	ng/kg	Grab	2/Year
4,4-DDD	ng/kg	Grab	2/Year
2,4-DDE	ng/kg	Grab	2/Year
4,4-DDE	ng/kg	Grab	2/Year
2,4-DDT	ng/kg	Grab	2/Year
4,4-DDT	ng/kg	Grab	2/Year
Aldrin	ng/kg	Grab	2/Year
Alpha-Chlordane	ng/kg	Grab	2/Year
Dieldrin	ng/kg	Grab	2/Year
Endosulfan	ng/kg	Grab	2/Year
Endrin	ng/kg	Grab	2/Year
Gamma-BHC	ng/kg	Grab	2/Year

Determination	Units	Type of Sample	Minimum Frequency
Heptachlor	ng/kg	Grab	2/Year
Heptachlor Epoxide	ng/kg	Grab	2/Year
Hexachlorobenzene	ng/kg	Grab	2/Year
Mirex	ng/kg	Grab	2/Year
Trans-Nonachlor	ng/kg	Grab	2/Year
Acenapthene	µg/kg	Grab	2/Year
Acenaphthylene	µg/kg	Grab	2/Year
Anthracene	µg/kg	Grab	2/Year
Benzo(a)anthracene	µg/kg	Grab	2/Year
Benzo(o)fluoranthene	µg/kg	Grab	2/Year
Benzo(k)fluoranthene	µg/kg	Grab	2/Year
Benzo(ghi)pyrelene	µg/kg	Grab	2/Year
Benzo(a)pyrene	µg/kg	Grab	2/Year
Benzo(e)pyrene	µg/kg	Grab	2/Year
Biphenyl	µg/kg	Grab	2/Year
Chrysene	µg/kg	Grab	2/Year
Dibenz(ah)anthraces	µg/kg	Grab	2/Year
Fluoranthene	µg/kg	Grab	2/Year
Fluorene	µg/kg	Grab	2/Year
Ideno(123cd)pyrene	µg/kg	Grab	2/Year
Naphthalene	µg/kg	Grab	2/Year
1-Methylnaphthalene	µg/kg	Grab	2/Year
2-Methylnaphthalene	µg/kg	Grab	2/Year
2,6-Dimethylnaphthalene	µg/kg	Grab	2/Year
2,3,5-Trimethylnaphthale	µg/kg	Grab	2/Year
Perylene	µg/kg	Grab	2/Year
Phenanthrene	µg/kg	Grab	2/Year
1-Methylphenanthene	µg/kg	Grab	2/Year
Pyrene	µg/kg	Grab	2/Year

2. **Sediment Toxicity**

   a. **Sediment Toxicity Monitoring Plan.** Sediment toxicity is a measure of the response of invertebrates exposed to surficial sediments under controlled laboratory conditions. The sediment toxicity line of evidence is used to assess both pollutant related biological effects and exposure. Within 180 days of the effective date of this permit, the Discharger shall, in consultation with the USIBWC, the San Diego Water Board, and the State Water Board, prepare and submit a Sediment Toxicity Monitoring Plan to implement an on-going acute sediment toxicity monitoring program in conformance with the requirements of Ocean Plan Appendix III, Standard Monitoring Procedures, Aquatic Life Toxicity. The Monitoring Plan shall include the following elements:

      i. Quality Assurance Project Plan. An ELAP approved Quality Assurance Project Plan (QAPP) describing the project objectives and organization, functional activities, and quality assurance/quality control protocols for the sediment monitoring.

ii. Toxicity Testing Protocols. The Ocean Plan requires that acute toxicity testing be conducted utilizing alternative amphipod species (*Eohaustorius estuarius, Leptocheirus plumulosus, Rhepoxynius abronius*).

iii. Spatial Representation. The Sediment Toxicity Monitoring Plan shall be designed to ensure that the sample stations are spatially representative of the sediment within the region of interest. The locations, type, and number of samples shall be identified and shown on a map

iv. Existing Data and Information. The Sediment Toxicity Monitoring Plan design shall take into consideration existing data and information of appropriate quality.

v. Monitoring Frequency. The Sediment Toxicity Monitoring Plan shall include a schedule for all sample collection and analysis and reporting of results to the San Diego Water Board.

vi. Analysis. The Sediment Toxicity Monitoring Plan shall provide for evaluation, interpretation and tabulation of the sediment monitoring data including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each sample station.

b. **Sediment Toxicity Monitoring Plan Implementation.** The Discharger shall implement the Sediment Toxicity Monitoring Plan sixty (60) days after submission in accordance with the schedule contained in the Sediment Toxicity Monitoring Plan unless otherwise directed in writing by the San Diego Water Board. Before beginning sample collection activities, the Discharger shall comply with any conditions set by the San Diego Water Board.

3. **Benthic Community Condition**

a. **Benthic Community Sampling Stations and Frequency.** Sediment samples for assessment of benthic community structure shall be collected twice per year during Winter (e.g., January) and Summer (e.g., July) at each of the 27 offshore stations described above for sediments. One sample per station shall be collected for analysis of benthic community structure.

b. **Benthic Community Sample Collection Methods.** Benthic community samples shall be collected using the guidance specified in the most recent field manual developed for the Southern California Bight Regional Monitoring Program. The benthic samples shall be collected using a 0.1-square meter modified Van Veen grab sampler. These grab samples shall be separate from (but adjacent to as much as possible) samples collected for sediment grain-size and chemistry analyses. The samples shall be sieved using a 1.0-millimeter mesh screen. The benthic organisms retained on the sieve shall be fixed in 10 percent buffered formalin, and transferred to at least 70 percent ethanol within two to seven days of storage. Benthic organisms, obtained during benthic monitoring shall be counted and identified to as low a taxon as possible.

c. **Benthic Community Analysis.** Analysis of benthic community structure shall include determination of the number of species, number of individuals per species, and total numerical abundance present. The following parameters or metrics shall be calculated for each 0.1-square meter grab sample and summarized by station as appropriate.

i. Number of species ~~per 0.1-square meter~~

ii. Total numerical abundance

iii. Benthic Response Index (BRI)

iv. Swartz's 75 percent dominance index

v. Shannon-Weiner's diversity index (H)

vi. Pielou eveness index (J)

In addition to summarizing the above community structure parameters at each station, a more rigorous assessment shall be performed as detailed in this MRP, section VIII.E~~each year that includes more detailed comparisons to evaluate any spatial and temporal patterns or trends in the data. Methods may include, but are not limited to, various multivariate statistical techniques, such as cluster analysis, ordination, and regression. Additional analyses shall also be conducted to further evaluate relationships between benthic community structure and sediment quality~~.

d. **Benthic ~~Community~~ Random Sampling.** This MRP, the MRP for the PLOO, and the MRP for the South Bay International Wastewater Treatment Plant (SBIWTP)[1] require the U.S. Section of the International Boundary and Water Commission (USIBWC) and the Discharger to sample and analyze annually for sediment chemistry and benthic community conditions at an additional array of 40 randomly selected stations. ~~Beginning with calendar year 2015, an additional array of 40 randomly selected stations shall be sampled and analyzed annually for sediment chemistry and benthic community conditions~~. The same sampling and processing procedures must be followed as outlined above for core benthic sediment and benthic community condition monitoring. These stations shall be reselected each year by USEPA or their designee to meet the requirements for this MRP, the MRP for the PLOO, and the MRP for the SBIWTP using the USEPA probability-based Environmental Monitoring and Assessment Program (EMAP) design. The area of coverage shall extend from the mouth of the San Dieguito River south to the USA/Mexico border.

The random benthic sampling requirement may be suspended as part of a resource exchange agreement to allow for participation in the Southern California Bight Regional Monitoring Surveys at the discretion of the Executive Officer as specified in section II.R of this Order.

~~e. **Benthic Community Monitoring Reporting Frequency.** The Discharger shall submit reports to the San Diego Water Board on benthic monitoring annually in accordance with the due dates specified in Table E-11 for the Annual Receiving Waters Monitoring Report. The reports shall include, as a minimum, the following information:~~

~~i. 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.)~~

~~ii. 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.).~~

[1] Order No. R9-2017-0007, NPDES No. CA0107409, *Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of San Diego E.W. Blom Point Loma Wastewater Treatment Plant Discharge to the Pacific Ocean through the Point Loma Ocean Outfall*, Monitoring and Reporting Program (Attachment E)
Order No. R9-2014-0009 as amended by Order Nos. R9-2014-0094 and R9-2017-0024, NPDES Permit No. CA0108928, *Waste Discharge Requirements for the United States Section of the International Boundary and Water Commission, South Bay International Wastewater Treatment Plant, Discharge to the Pacific Ocean via the South Bay Ocean Outfall*, Monitoring and Reporting Program (Attachment E)

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

~~iv. A description of the specific method used for laboratory analysis.~~

~~v. An in-depth discussion of the results of the survey including detailed statistical analyses of all data. All tabulations and computations shall be explained.~~

~~vi. An in-depth discussion, evaluation, interpretation and tabulation of benthic data including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each sample station.~~

D. Fish and Invertebrate Monitoring Requirements

Many pollutants discharged into receiving waters have the potential to bioaccumulate and persist in tissues of aquatic organisms, including ~~fish~~marine fishes. Chemical pollutants that bioaccumulate tend to magnify in concentration as they pass through the aquatic food chain. ~~Fish~~ Therefore, fish monitoring data is required to assess the human health risks for individuals who may consume fish and to assess trends of contaminants levels in the receiving water over time.

Aquatic invertebrates are excellent indicators of ecosystem health because they are ubiquitous, abundant, diverse, and typically sedentary. The growth, survival, and reproduction of many species of aquatic invertebrates are all sensitive to ~~declines~~ changes in environmental health, making analysis of assemblage structure a good ecosystem monitoring tool.

Fish and invertebrate monitoring is necessary to answer the following questions:

(1) Does the concentration of pollutants in fish, shellfish, or other marine organisms used for human consumption bioaccumulate to levels that are harmful to human health?

(2) Does the concentration of pollutants in marine life bioaccumulate to levels that degrade marine communities?

(3) Are the concentrations of pollutants in fish and other marine organisms changing over time?

(4) Is the health of fish changing over time?

(5) Are the populations of selected species of fish and invertebrates~~Is the population of selected species~~ changing over time?

1. Fish and Invertebrate Trawls

a. **Fish and Invertebrate Trawl Frequency and Monitoring Stations.** Epibenthic trawls shall be conducted to assess the structure of demersal fish and megabenthic invertebrate communities, while the presence of priority pollutants in fish will be analyzed from species captured using both trawling and rig fishing techniques (see section VIII.D.2 for more information). Single community trawls for fish and invertebrates shall be conducted semi-annually in the winter (e.g., January) and summer (e.g., July)~~semiannually (January and July)~~ at seven trawl stations designated SD15–SD21 at the locations specified in Table E-1. These stations represent two areas near Discharge Point No. 001 (stations SD-17 and SD-18), two areas up coast of Discharge Point No. 001 (stations SD-19, SD-20, and SD-21), and two areas down coast of Discharge Point No. 001 (stations SD 15 and SD-16). Trawls shall be conducted using a Marinovich 7.62 m (25 ft) head rope otter trawl, using the guidance specified in the most recent field manual developed for the Southern California Bight Regional Monitoring Program. All trawl-captured fishes and megabenthic invertebrates shall be identified at each station.

In order to minimize negative impacts that may occur due to unsuccessful trawling efforts associated with unusual environmental conditions, the requirement to conduct trawls during any given period may be postponed or waived at the discretion of the Executive Officer of the San Diego Water Board, in concurrence with USEPA, upon receipt of written justification provided by the Discharger. Examples of such unusual events include the presence of large populations of pelagic red crabs (*Pleuroncodes planipes*) associated with El Niño and the occurrence of large squid egg masses that prevent hauling in the trawl nets.

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

c. **Fish Tissue Chemical Analysis.** Chemical analyses of fish tissues shall be performed annually (~~i.e.~~e.g., during October) on target species collected at or near the trawl stations. The ~~various~~ seven stations are classified into five zones for the purpose of collecting sufficient numbers of fish for tissue analyses. Trawl Zone 5 represents the nearfield zone, defined as the area within a 1-km radius of stations SD-17 and/or SD-18; Trawl Zone 6 represents the north farfield zone, defined as the area within a 1-km radius of stations SD-19 and/or SD-20; Trawl Zone 7 represents the far-north farfield zone, defined as the area within a 1-km radius of station SD-21; Trawl Zone 8 represents the south farfield zone, defined as the area within a 1-km radius of station SD-16; Trawl Zone 9 represents the far-south farfield zone, defined as the area within a 1-km radius of station SD-15. There are no depth requirements for these five zones with regards to the collection of fishes for tissue analysis.

Liver tissues shall be analyzed during each survey from fishes collected in each of the above five trawl zones ~~during the annual~~each ~~survey~~. No more than a maximum of five 10-minute (bottom time) trawls shall be required per zone in order to acquire sufficient numbers of fish for composite samples; these trawls may occur anywhere within a defined zone. If sufficient numbers of trawl zone target species cannot be, or are unlikely to be, captured by trawling, fish for tissue analysis from these areas may be collected using alternative methods such as those described below under Rig Fishing in section VIII.D.2.b of this MRP (e.g., hook and line, baited lines). Three replicate composite samples shall be prepared from each trawl zone, with each composite consisting of tissues from at least three individual fish of the same species. These liver tissues shall be analyzed for the constituents listed in Table E-9 below.

Table E-9. Fish Tissue Monitoring Requirements

Determination	Units	Type of Sample	Minimum Frequency
Total Lipids	~~µ~~mg/kg percent weight	Composite	Annual
Aluminum	mg/kg	Composite	Annual
Antimony	mg/kg	Composite	Annual
Arsenic	mg/kg	Composite	Annual
Cadmium	mg/kg	Composite	Annual

Determination	Units	Type of Sample	Minimum Frequency
Chromium	mg/kg	Composite	Annual
Copper	mg/kg	Composite	Annual
Iron	mg/kg	Composite	Annual
Lead	mg/kg	Composite	Annual
Manganese	mg/kg	Composite	Annual
Mercury	mg/kg	Composite	Annual
Nickel	mg/kg	Composite	Annual
Selenium	mg/kg	Composite	Annual
Silver	mg/kg	Composite	Annual
Tin	mg/kg	Composite	Annual
Zinc	mg/kg	Composite	Annual
PCBs	µg/kg	Composite	Annual
2,4-DDD	µg/kg	Composite	Annual
4,4-DDD	µg/kg	Composite	Annual
2,4-DDE	µg/kg	Composite	Annual
4,4-DDE	µg/kg	Composite	Annual
2,4-DDT	µg/kg	Composite	Annual
4,4-DDT	µg/kg	Composite	Annual
Aldrin	µg/kg	Composite	Annual
Alpha-Chlordane	µg/kg	Composite	Annual
Dieldrin	µg/kg	Composite	Annual
Endosulfan	µg/kg	Composite	Annual
Endrin	µg/kg	Composite	Annual
Gamma-BHC	µg/kg	Composite	Annual
Heptachlor	µg/kg	Composite	Annual
Heptachlor Epoxide	µg/kg	Composite	Annual
Hexachlorobenzene	µg/kg	Composite	Annual
Mirex	µg/kg	Composite	Annual
Trans-Nonachlor	µg/kg	Composite	Annual
Acenapthene	µg/kg	Composite	Annual
Acenaphthylene	µg/kg	Composite	Annual
Anthracene	µg/kg	Composite	Annual
Benzo(a)anthracene	µg/kg	Composite	Annual
Benzo(o)fluoranthene	µg/kg	Composite	Annual
Benzo(k)fluoranthene	µg/kg	Composite	Annual
Benzo(ghi)pyrelene	µg/kg	Composite	Annual
Benzo(a)pyrene	µg/kg	Composite	Annual
Benzo(e)pyrene	µg/kg	Composite	Annual
Biphenyl	µg/kg	Composite	Annual
Chrysene	µg/kg	Composite	Annual
Dibenz(ah)anthraces	µg/kg	Composite	Annual
Fluoranthene	µg/kg	Composite	Annual
Fluorene	µg/kg	Composite	Annual
Ideno(123cd)pyrene	µg/kg	Composite	Annual
Naphthalene	µg/kg	Composite	Annual
1-Methylnaphthalene	µg/kg	Composite	Annual
2-Methylnaphthalene	µg/kg	Composite	Annual
2,6-Dimethylnaphthalene	µg/kg	Composite	Annual

Determination	Units	Type of Sample	Minimum Frequency
2,3,5-Trimethylnaphthale	µg/kg	Composite	Annual
Perylene	µg/kg	Composite	Annual
Phenanthrene	µg/kg	Composite	Annual
1-Methylphenanthene	µg/kg	Composite	Annual
Pyrene	µg/kg	Composite	Annual

d. **Fish Targeted for Analysis.** The species of fish targeted for tissue analysis from the trawl sites shall be primarily flatfish, including, but not limited to, Pacific sanddab (*Citharichthys sordidus*), longfin sanddab (*Citharichthys xanthostigma*), bigmouth sole (*Hippoglossina stomata*), and hornyhead turbot (*Pleuronichthys verticalis*). If sufficient numbers of these primary flatfish species are not present in a zone, secondary candidate species such as the California scorpionfish (*Scorpaena guttata*) and halfbanded rockfish (*Sebastes semicinctus*) may be collected as necessary.

~~e. **Fish and Invertebrate Trawls Report Frequency.** The Discharger shall submit reports to the San Diego Water Board on fish and invertebrate trawl monitoring annually in accordance with the due dates specified in Table E-11 for the Annual Receiving Waters Monitoring Report. The reports shall include, as a minimum, the following information:~~

~~i. 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.).~~

~~ii. A description of sampling stations, including, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.).~~

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

~~iv. A description of the specific method used for laboratory analysis.~~

~~v. An in-depth discussion, evaluation, interpretation and tabulation of fish and invertebrate trawl data including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each trawl sample station.~~

2. Rig Fishing

a. **Rig Fishing Frequency.** Muscle tissues shall be analyzed annually (~~i.e.~~e.g., during October) from fishes collected in each of the two rig fishing zones described below in order to monitor the uptake of pollutants in species and tissues that are consumed by humans.

b. **Rig Fishing Method and Location.** The fish shall be collected by hook and line or by setting baited lines from within zones surrounding rig fishing stations RF-3 and RF-4 listed in Table E-1. Rig Fishing Zone 3 is the nearfield (near ZID) area centered within a 1-km radius of station RF-3; Rig Fishing Zone 4 is considered the farfield area centered within a 1-km radius of station RF-4. There are no depth requirements for these two zones with regards to the collection of fishes for tissue analysis. The species targeted for muscle tissue analysis in the rig fishing stations shall be representative of those caught by recreational and/or commercial fishery

activities in the region. The species targeted for muscle tissue analysis shall be primarily rockfish, which may include, but are not limited to, the vermilion rockfish (*Sebastes miniatus*) and the copper rockfish (*Sebastes caurinus*). If sufficient numbers of these primary species are not present or cannot be caught in a particular zone, secondary target species (e.g., other rockfish, scorpionfish) may be collected and analyzed as necessary. Fish samples shall be identified to species, with number of individuals per species, standard length and wet weight recorded. ~~The presence of any physical abnormalities or disease symptoms (e.g., fin erosion, external lesions, tumors) or parasites shall also be recorded.~~ Physical abnormalities and disease symptoms shall be recorded and itemized (e.g., fin rot, lesions, and tumors).

c. **Rig Fishing Collection.** Three replicate composite samples of the target species shall be obtained from each zone, with each composite consisting of a minimum of three individual fish. Muscle tissue shall be chemically analyzed for the same set of constituents as trawl-caught fish specified in Table E-9 above.

~~d. **Rig Fishing Report Frequency.** The Discharger shall submit reports to the San Diego Water Board on rig fishing monitoring annually in accordance with the due dates specified in Table E-11 for the Annual Receiving Waters Monitoring Report. The reports shall include, as a minimum, the following information:~~

~~i. 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.).~~

~~ii. A description of sampling stations, including, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.).~~

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

~~iv. A description of the specific method used for laboratory analysis.~~

~~v. An in-depth discussion, evaluation, interpretation and tabulation of fish data including interpretations and conclusions as to whether applicable Receiving Water Limitations in this Order have been attained at each rig fishing station.~~

E. Receiving Water Monitoring Reports

1. The Discharger shall submit Interim and Biennial Receiving Water Monitoring Reports to the San Diego Water Board. The Interim Receiving Water Monitoring Reports will cover only one year of receiving water monitoring (e.g., separate reports for calendar years 2016, 2018, and 2020), will only cover even numbered years, and shall be submitted every other year. The Biennial Receiving Water Monitoring Reports will provide a more thorough discussion, evaluation (e.g., detailed statistical analyses), and interpretation than the Interim Receiving Water Monitoring Reports, will cover two years of receiving water monitoring (e.g., biennial reports for calendar years 2016-2017, 2018-2019, and 2020-2021), and shall be submitted the opposite years as the Interim Receiving Water Monitoring Reports. These reports are described below under sections VIII.E.2 and VIII.E.3 and cover the following monitoring requirements:

   a. Shoreline, offshore, and kelp monitoring (sections VIII.A and VIII.B.1 of this MRP);

b. Sediment chemistry (section VIII.C.1 of this MRP);

c. Sediment toxicity (section VIII.C.2 of this MRP);

d. Benthic community (section VIII.C.3 of this MRP);

e. Fish and invertebrate trawls (section VIII.D.1 of this MRP);

f. Rig fishing (section VIII.D.2 of this MRP); and

g. Plume tracking (section VIII.B.2 of this MRP).

2. The Discharger shall submit Interim Receiving Water Monitoring Reports (Interim Reports, executive summary) as specified in Table E-10, section X.B of this MRP. The Interim Reports will cover the first "even" year in each biennial reporting cycle as described below in section VIII.E.3 (e.g., separate reports for calendar years 2016, 2018, and 2020). The Interim Reports may be submitted as an integrated report covering both the receiving water monitoring required in this MRP, the MRP for the PLOO, and the MRP for the SBIWTP (as required under separate waste discharge requirements (WDRs)). The Interim Reports shall include, as a minimum, the following information:

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

   b. A description of sampling stations, including, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.);

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

   d. A description of the specific method used for laboratory analysis;

   e. A tabulation of the data; and

   f. A narrative summary of general observations, including any abnormal conditions.

3. The Discharger shall submit Biennial Receiving Water Monitoring and Assessment Reports (Biennial Reports, full assessment) as specified in Table E-10, section X.B of this MRP. These Biennial Reports will each cover a full 2-year monitoring cycle beginning with even-numbered years (e.g., biennial reports for calendar years 2016-2017, 2018-2019, 2020-2021). The Biennial Reports may be submitted as an integrated report covering both the receiving water monitoring required in this MRP, the MRP for the PLOO, and the MRP for the SBIWTP (as required under separate WDRs). The Biennial Reports shall include, as a minimum, the following information:

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

   b. A description of sampling stations, including, if such information is available, differences unique to each station (e.g., station location, sediment grain size, distribution of bottom sediments, rocks, shell litter, calcareous worm tubes, etc.);

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

   d. A description of the specific method used for laboratory analysis; and

e. An in-depth discussion, evaluation (e.g., detailed statistical analyses), interpretation and tabulation of the data including interpretations and conclusions as to whether applicable receiving water limitations in this Order have been attained at each station.

4. During the same year that the Biennial Reports are submitted, the Discharger shall provide a Biennial State of the Ocean Report (an oral report) to the San Diego Water Board summarizing the conclusions of the Biennial Report over the 2-year monitoring period. If an oral report cannot be scheduled for a San Diego Water Board meeting, the San Diego Water Board may approve submission of a written Biennial State of the Ocean Report instead. The Biennial State of the Ocean Report shall include, as a minimum, a description of the monitoring effort completed during the past two years, the status and trends of receiving waters quality conditions, and plans for future monitoring efforts.

IX. REGIONAL MONITORING REQUIREMENTS

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through intercalibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters. These programs shall be developed and implemented so as to:

(1) Determine the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses, e.g.,

i. Are fish and shellfish safe to eat?

ii. Is water quality safe for swimming?

iii. Are ecosystems healthy?

(2) Identify the primary stressors causing or contributing to conditions of concern;

(3) Identify the major sources of the stressors causing or contributing to conditions of concern; and

(4) Evaluate the effectiveness (i.e., environmental outcomes) of actions taken to address such stressors and sources.

Development and implementation of new and improved monitoring and assessment programs for ocean waters will be guided by the following:

1. Water Quality Control Plan Ocean Waters of California (Ocean Plan);
2. San Diego Water Board Resolution No. R9-2012-0069, "Resolution in Support of A Regional Monitoring Framework;"
3. San Diego Water Board staff report entitled "A Framework for Monitoring and Assessment in the San Diego Region;" and
4. Other guidance materials, as appropriate.

A. Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (Macrocystis pyrifera) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals. Monitoring of the kelp beds is necessary to answer the following questions:

(1) What is the maximum areal extent of the coastal kelp bed canopies each year?

(2) What is the variability of the coastal kelp bed canopy over time?

(3) Are coastal kelp beds disappearing? If yes, what are factors that could contribute to the disappearance?

(4) Are new coastal kelp beds forming?

The Discharger shall participate with other southern California ocean dischargers in an ongoing regional survey of coastal kelp beds in the Southern California Bight. The intent of these surveys is to provide an indication of the health of these kelp beds, recognizing that the extent of kelp bed canopies may change due to variety of influences.

Kelp beds shall be monitored by means of vertical aerial infrared photography to determine the maximum areal extent of the canopies of coastal kelp beds each year. Surveys shall be conducted as close as possible to when kelp bed canopies are at their greatest extent during the year. The entire San Diego Region coastline, from the international boundary to the San Diego Region/Santa Ana Region boundary shall be photographed on the same day.

The maximum areal extent of kelp bed canopies each year shall be compared to that observed in previous years. Any significant losses that persist for more than one year shall be investigated by divers to document benthic and understory conditions.

The data, analyses, assessment, and images produced by the surveys shall be made available in a user-friendly format on a website that is readily available to the public. In addition to the kelp bed canopies, the images shall show onshore reference points, locations of all ocean outfalls and diffusers, artificial reefs, areas of known hard-bottom substrate (i.e., rocky reefs), and depth contours at intervals of 30-feet mean lower low water (MLLW).

The surveys shall be conducted on a "continuous improvement" basis, i.e., each year improvements shall be made in monitoring, analysis, assessment, and/or documentation. For example, these could include:

1. More sophisticated analysis of patterns, correlations, and cycles that may be related to the extent of kelp bed canopies; or
2. Projects to improve understanding of influences on kelp beds or of how the extent of the canopies of various kelp beds has changed since the early 20th century.

B. Southern California Bight Monitoring Program Participation Requirements

The Discharger is required to participate in the, Southern California Bight Regional Monitoring Program coordinated by the Southern California Coastal Water Research Project (SCCWRP), or any other coordinator named by the Executive Officer, pursuant to CWC 13267, 13383, and 40 CFR 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Southern California Bight.

During these coordinated sampling efforts, the Discharger's receiving water sampling and analytical effort, as defined in section IV of this MRP, may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. In that event, the Executive Officer shall notify the Discharger in writing that the requirement to perform the receiving water sampling and analytical effort defined in section IV of this MRP is suspended for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section IV this MRP shall approximately equal the level of resources provided to implement the regional monitoring and assessment program, unless the Executive Officer, the Discharger and the USIBWC agree otherwise. The specific scope and duration of the receiving water monitoring program reallocation and redirection shall be determined in writing by the Executive Officer in consultation with the Discharger and USIBWC.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

~~2. Reports of marine monitoring surveys conducted to meet receiving water monitoring requirements of this MRP shall include, as a minimum, the following information:~~

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

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

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

~~d. A description of the specific method used for laboratory analysis.~~

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

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

~~3.~~2. The Discharger shall report all instances of noncompliance not reported under Attachment D, Sections V.E, V.G, and V.H, of this Order at the time monitoring reports are submitted.

B. Self Monitoring Reports (SMRs)

1. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through X. The Discharger shall submit SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

2. Unless otherwise noted in the MRP, monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency/ Report Type	Monitoring Period Begins	Monitoring Period	SMR Due Date
Continuous	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month.	All	First day of second calendar month following month of sampling.
1/Day	First day of the calendar month following the permit effective date or on permit effective date if that date is first day of the month.	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	First day of second calendar month following month of sampling.
1/Week	First Sunday of the calendar month following the permit effective date or on permit effective date if that date is on the first Sunday of the calendar month.	Sunday through Saturday	First day of second calendar month following month of sampling.
1/Month (including all spills or no spill report[1])~~[2]~~	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month.	First day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.
1/~~Quarter[2]~~Quarter[3]	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date.	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1/~~Year[3]~~Year[4]	January 1 following (or on) permit effective date.	January 1 through December 31	March 1

Sampling Frequency/ Report Type	Monitoring Period Begins	Monitoring Period	SMR Due Date
~~Annual Receiving Water Monitoring Report[4]~~	~~January 1 following (or on) permit effective date.~~	~~January 1 through December 31~~	~~July 1~~
Interim Receiving Water Monitoring Report (executive summary)[5]	January 1 following (or on) the Order effective date.	One calendar year	July 1 of the year following the even years (e.g., separate reports for calendar years 2016 (due 7/1/2017), 2018 (due 7/1/2019), and 2020 (due 7/1/2021))
Biennial Receiving Water Monitoring and Assessment Report (full assessment) [6]	January 1 following (or on) the Order effective date.	Two calendar years	July 1 of the year following the odd years (e.g., biennial reports for calendar years 2016-2017 (due 7/1/2018), 2018-2019 (due 7/1/2020), and 2020-2021(due 7/1/2022))
Oral/Written Biennial State of the Ocean Report[7]	January 1 following (or on) the Order effective date.	Two calendar years	By December 31 of the year following the odd years (e.g., biennial reports for calendar years 2016-2017 (due 12/2018), 2018-2019 (due 12/2020), and 2020-2021(due 12/2022))

[1] As required by Section VI.C.2.b.iv. of Order No. R9-2013-0006 (page 21)
[2] Include monitoring results for offshore stations (section IV.B of this MRP) in the monthly SMRs
~~2~~ 3 If sample results for parameters or toxicity tests required to be conducted once per quarter (1/quarter) are not provided in the quarterly SMR for the monitoring period in which the sample was collected, the Discharger shall identify the SMR(s) which contains the sample results.
~~3~~ 4 If sample results for parameters or toxicity tests required to be conducted once per year (1/year) are not provided in the annual SMR for the monitoring period in which the sample was collected, the Discharger shall identify the SMR(s) which contains the sample results.
~~4~~ 5 As specified in sections VIII.E.1 and VIII.E.2 of this MRP. ~~The Annual receiving water monitoring report shall include benthic, fish trawl, and rig fishing monitoring, as well as an assessment on all receiving water monitoring data.~~
~~6.~~ As specified in sections VIII.B.2.c, VIII.E.1, and VIII.E.3 of this MRP.
~~6.~~ 7. As specified in section VIII.E.4 of this MRP.

3. **Reporting Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136. For each numeric effluent limitation or performance goal for a parameter identified in Table B of the Ocean Plan, the Discharger shall not use a ML greater than that specified in Appendix II of the Ocean Plan.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

   a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   b. Sample results less than the ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

   For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

4. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the reportable pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML.

5. **Multiple Sample Data.** When determining compliance with a measure of central tendency (arithmetic mean, geometric mean, median, etc.) of multiple sample analyses and the data set contains one or more reported determinations of DNQ or ND, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

   a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

6. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). SMRs must be signed and certified as required by the Standard Provisions (Attachment D). The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

b. When CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

c. The Discharger shall attach a cover letter to the SMR.

d. The Discharger shall clearly identify violations of the waste discharge requirements; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

C. Discharge Monitoring Reports (DMRs)

1. At any time during the term of this permit, the State or San Diego Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

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

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of USEPA Form 3320-1.

D. Other Reports

The following reports are required under Special Provisions (Section VI.C), Attachment E Section IX, and the California Code of Regulations and shall be submitted to the San Diego Water Board, signed and certified as required by the Standard Provisions (Attachment D):

Table E-11. Other Reports

Report	Location of requirement	Due Date
Significant Industrial User Compliance Status Report	Section VI.C.5.c.v	Semiannually on September 1 and March 1
Pretreatment Program	Section VI.C.5.c.iv	Annually on March 1
Technical Evaluation of the Need to Revise Local Limits	Section VI.C.5.c.vii	Following permit reissuance
Toxicity Reduction Evaluation workplan	Section VI.C.2.d	180 days after adoption of this Order
Results of any Toxicity Reduction Evaluation/Toxicity Identification (TRE/TIE) Evaluation	Section VI.C.2.c	Within 30 days of completion of the TRE/TIE
Report of Waste Discharge (for reissuance)	Title 23, California Code of Regulations	180 days before the Order expiration date
Plume Tracking Monitoring Plan (PTMP)	Section VIII.B.2 of this MRP	March 30, 2018
South Bay Ocean Outfall Capacity report	Section VI.C.5.a	180 days before the Order expiration date
POTW Capacity Report	Section VI.C.5.b	Four years prior to reaching plant design capacity

ATTACHMENT F – FACT SHEET

Attachment F – Fact Sheet

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ATTACHMENT F – FACT SHEET

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

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	**9 000000900**
Discharger	City of San Diego
Name of Facility	South Bay Water Reclamation Plant
Facility Address	2411 Dairy Mart Road San Diego, CA 92154 San Diego County
Facility Contact, Title and Phone	Halla Razak, Director of Public Utilities, (858) 292-6401
Authorized Person to Sign and Submit Reports	Halla Razak, Director of Public Utilities, (858) 292-6401
Mailing Address	9192 Topaz Way, San Diego, CA 92123
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Reclamation Requirements	Producer and Distributor (regulated under separate waste discharge requirements (WDRs))
Facility Permitted Flow	15.0 MGD
Facility Design Flow	18.0 MGD
Watershed	Pacific Ocean
Receiving Water	Pacific Ocean
Receiving Water Type	Ocean

A. The City of San Diego (hereinafter Discharger) is the owner and operator of the South Bay Water Reclamation Plant (Facility), the San Ysidro sanitary sewer system, and a portion of the Imperial Beach sanitary sewer system; together these facilities comprise the municipal publicly-owned treatment works.

B. For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

C. The Discharger discharges effluent consisting of treated wastewater from the Facility through the South Bay Ocean Outfall (SBOO) to the Pacific Ocean, a water of the United States, and is currently regulated by Order No. R9-2006-0067, which was adopted on November 8, 2006 and expired on January 1, 2012. In accordance with section 122.6, title 40 of the Code of Federal Regulations (40 CFR 122.6), the terms of the existing Order were administratively extended and continued in effect after the permit expiration date.

D. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on July 1, 2011.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment or Controls

The Discharger owns and operates the Facility, which is located at 2411 Dairy Mart Road, San Diego, adjacent to the United States and Mexico Border.

The Discharger provides municipal wastewater treatment services to a population of approximately 150,000. The Facility treats wastewater collected from the southern portion of the City of San Diego. The Facility treats wastewater collected from several City of San Diego communities, including San Ysidro, Otay Mesa, and the Tijuana River Valley (all of which flow through the Grove Avenue Pump Station (GAPS)). The Facility also receives raw wastewater from a portion of the Imperial Beach system (through the Otay River Pump Station). The City of Chula Vista, and unincorporated portions of South County and East County also contribute wastewater flows to the Facility. Wastewater from the GAPS and the Otay River Pump Station is primarily domestic sewage from residential and commercial activities.

Wastewater treatment unit operations and processes at the Facility consist of influent screening using mechanical bar screens, aerated grit chambers, primary sedimentation tanks, 1.5 million gallons of primary flow equalization, air-activated sludge process and an anoxic selector zone, secondary clarifiers, mono-media (anthracite) filters, and ultraviolet disinfection.

The Facility produces tertiary treated reclaimed water which is transferred through a reclaimed water distribution system to qualified reclaimed water customers. All influent flow receives secondary treatment. The quantity of flow directed to the tertiary filtration facilities is dependent on anticipated recycled water demands. During times of no recycled water demand, up to 15 MGD of secondary effluent will be discharged to the Pacific Ocean through the SBOO. During times of high recycled water demand, the entire effluent flow may be directed to tertiary treatment and subsequent beneficial reuse.

Solids removed through the screening and grit removal processes are hauled offsite and disposed of in a landfill. Waste solids removed through the sedimentation/clarification process are returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant, where they are again removed and directed to anaerobic digesters at the Point Loma Wastewater Treatment Plant for stabilization. After digestion, the solids are dewatered and thickened for reuse as a soil amendment or for disposal.

Secondary treatment design capacity at the Facility is currently 18.0 MGD as a 30-day average daily flow. The current maximum permitted flow is 15.0 MGD.

The City of San Diego maintains a United States Environmental Protection Agency (USEPA) approved pretreatment program for the Facility administered by the Industrial Wastewater Control Program of the Public Utilities Department. The Discharger receives wastewater from six non-categorical Significant Industrial Users and five Categorical Industrial Users.

The City of San Diego and the Federal Government jointly own and operate the SBOO.

Attachment B provides a map of the area around the Facility and the SBOO. Attachment C provides flow schematic of the Facility.

B. Discharge Points and Receiving Waters

The Discharger jointly owns and operates the SBOO with the International Boundary and Water Commission (IBWC) of the Federal Government. The SBOO was constructed for use by the Discharger and by the IBWC South Bay International Wastewater Treatment Plant (SBIWTP). The outfall extends westward approximately 23,600 feet from the mouth of the Tijuana River. The outfall terminates in a wye diffuser with two 1,980-foot diffusers. Each diffuser leg contains 82 diffuser riser assemblies, and one at the wye structure for a total of 165 diffuser riser assemblies. The SBOO was constructed with a total average design capacity of 174 MGD and a peak hydraulic capacity of 233 MGD. The Facility is permitted to discharge up to 15 MGD to the SBOO, and the SBIWTP is permitted to discharge up to 25 MGD of secondary treated wastewater to the SBOO. The effluent from the Facility is combined with the effluent from the SBIWTP within the SBOO prior to discharge to the Pacific Ocean. A maximum of 40 MGD of wastewater is permitted to be discharged to the SBOO from these two facilities. To achieve proper effluent velocity and dilution levels, 18 diffuser risers (72 open ports) are in use on the South leg. The North leg of the diffuser is closed with no open ports. The terminus of the diffuser is located at Latitude 32° 32' 15" North, Longitude 117° 00' 00" West.

For Order No. R9-2006-0067, the San Diego Water Board, with assistance from the State Water Board, determined the minimum initial dilution factor to be 94.6 for the discharge of up to 40 MGD of effluent through the SBOO using the USEPA-approved computer modeling package Visual Plumes with the UM3 model. The computer modeling was performed based on characteristics of the SBOO, the effluent, and the receiving water, subject to the input limitations of Visual Plumes. Monthly profiles for the receiving water were developed using receiving water data provided by the Discharger for the time period between June 2002 and April 2005. Initial dilution factors were determined for each monthly profile; the most conservative minimum initial dilution factor was determined using the May profile. Section IV.C.3 of this Fact Sheet includes additional discussion of initial dilution. Additional details of the initial dilution computer modeling performed are provided in Attachment H of Order No. R9-2006-0067 and in the San Diego Water Board records.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order No. R9-2006-0067 for discharges from Discharge Point No. 001 (Monitoring Location E-001) and representative monitoring data submitted during the term of the Order No. R9-2006-0067 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data at E-001

Parameter	Units	Effluent Limitations					Monitoring Data (January 2007 – December 2010)	
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Max	6-Month Median	Mean	Maximum
Flow	MGD	15	--	--	--	--	2.6 – 4.0[1]	8.3
Biochemical Oxygen Demand (5-day @ 20ºC) (BOD_5)	mg/L	30	45		50	--	3.8 – 22.7[1]	178
Total Suspended Solids (TSS)	mg/L	30	45		50	--	4.4 – 9.5[1]	64
pH	s.u.	Between 6.0 and 9.0 at all times					--	7.0 – 8.1[1]
Oil & Grease	mg/L	25	40		75	--	3.28	17.9
Settleable Solids	mL/L	1	2		3	--	<0.2	0.2
Turbidity	NTU	75	100		230	--	2.7	28.6
Total Chlorine Residual	µg/L	--	--	760	5,700	190	60[2]	2,900
Copper, Total Recoverable	µg/L	--	--	960	2,700	97	14.7	50.7

[1] Represents the range of annual averages.
[2] Calculated using half the detection values for non-detects.

D. Compliance Summary

1. Compliance Evaluation Inspections (CEIs) of the Facility were conducted on three occasions between 2007 and 2011. Compliance issues noted by the inspectors were as follows:

a. On October 20, 2008:

i. The inspector reported that several exceedances of the TSS and BOD_5 limitations were reported in June 2008. It was noted by the inspector that on the June 2008 monitoring report cover letter, the Discharger indicated that they believe the sampling location at the regular monitoring point for effluent to the ocean outfall is not representative when there is very low effluent flow due to recycled water production and distribution. The Discharger believed that during low flow periods, the relatively high flows from the SBIWTP backup into the Facility's effluent line and this commingled wastewater is collected in the automatic sampler. The inspector determined that the exceedances typically coincide with the days of exceptionally low flows from the Facility to the outfall.

b. On July 13, 2009:

i. The inspector stated that the Facility collects oil and grease samples with a composite sampler through sampling tubing, which is not consistent with 40 CFR 136, Table II, which requires that oil and grease samples are to be a grab sample collected directly into an amber glass container.

c. On February 11, 2011:

i. The inspector reported that the name of the individual performing sampling for BOD and TSS for December 25, 2010 was not available for review and the time composite samples are being collected is not being recorded. These findings are not consistent with the requirements specified in section IV.B of Attachment D to Order No. R9-2006-0067.

ii. The inspector stated that the Facility collects oil and grease samples with a composite sampler through sampling tubing, which is not consistent with 40 CFR 136, Table II, which requires that oil and grease samples are to be a grab sample collected directly into an amber glass container.

iii. The inspector reported that the Discharger was not able to demonstrate that pH samples were being analyzed within 15 minutes of sampling for samples collected on December 5, 2010 and December 26, 2010, as required by 40 CFR 136.

2. During 2007 and 2008, the location of the effluent monitoring station (E-001) did not comply with the requirement that the station be located prior to commingling with other discharges contributing to the SBOO. As noted in section II.D.1.a.i of this Fact Sheet, SBIWTP effluent back flowed into the Facility's effluent monitoring station and effluent samples were not be representative of actual effluent quality from the Facility. The Discharger supported this finding in their ROWD, where they state, "After considerable investigation, it became clear that the SBIWTP effluent was intruding into the sampling intake port for the SBWRP effluent when SBWRP had very low discharge flows." The Discharger further points out that subsequent to implementing a reengineered effluent sampling system in mid-2009, these impacts have not been observed. As a consequence of the backflow from SBIWTP in 2007 and 2008, several exceedances of BOD_5 and turbidity effluent limitations were reported. Effluent violations were not appropriate and monitoring violations were applied to each month that the effluent monitoring did not represent the effluent from the Facility (seven deficient monitoring violations).

3. From 2010, one exceedance of the daily maximum effluent limitation for total residual chlorine (760 µg/L) was reported:

a. The Discharger reported the daily average effluent concentration was 1,695 µg/L for July 19, 2010.

E. Planned Changes

The Discharger has not indicated that they have any planned capital improvement projects scheduled to occur within the term of Order No. R9-2013-0006.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (Water Code) (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from the Facility to surface waters. This Order also serves as WDRs pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt a NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The San Diego Water Board adopted a *Water Quality Control Plan for the San Diego Basin* (hereinafter Basin Plan) on September 8, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives. The Basin Plan was subsequently approved by the State Water Board on December 13, 1994. Subsequent revisions to the Basin Plan have also been adopted by the San Diego Water Board and approved by the State Water Board. The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to the Pacific Ocean specified in the Basin Plan are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point No.	Receiving Water Name	Beneficial Use(s)
001	Pacific Ocean	Industrial service supply; navigation; contact water recreation; non-contact water recreation; commercial and sport fishing; preservation of biological habitats of special significance; wildlife habitat; rare, threatened, or endangered species; marine habitat; aquaculture; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting.

Requirements of this Order implement the Basin Plan.

2. **California Ocean Plan.** The State Water Board adopted the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan) in 1972 and amended it in 1978, 1983, 1988, 1990, 1997, 2000, 2005, and 2009. The State Water Board adopted the latest amendment on September 15, 2009 and it became effective on March 10, 2010. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. The Ocean Plan identifies beneficial uses of ocean waters of the State to be protected as summarized below:

Table F-4. Ocean Plan Beneficial Uses

Discharge Point No.	Receiving Water	Beneficial Uses
001	Pacific Ocean	Industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration, fish spawning and shellfish harvesting.

In order to protect beneficial uses, the Ocean Plan establishes water quality objectives and a program of implementation. Requirements of this Order implement the Ocean Plan.

3. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

4. **Antidegradation Policy.** 40 CFR 131.12 requires that the State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The San Diego Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16.

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

D. Impaired Water Bodies on CWA 303(d) List

On November 12, 2010, USEPA approved the list of impaired water bodies, prepared by the State Water Board pursuant to section 303(d) of the CWA, which are not expected to meet applicable water quality standards after implementation of TBELs for point sources. The 303(d) list for waters in the vicinity of the SBOO include:

1. Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty for total coliform

2. Pacific Ocean Shoreline, Imperial Beach Pier for fecal coliform, total coliform, and PCBs (fish tissue)

3. Pacific Ocean Shoreline, Tijuana HU, at end of Seacoast Drive for enterococcus, fecal coliform, and total coliform

4. Pacific Ocean Shoreline, Tijuana HU, at 3/4 mile North of Tijuana River for enterococcus, fecal coliform, and total coliform

5. Pacific Ocean Shoreline, Tijuana HU, at Tijuana River mouth for enterococcus, fecal coliform, and total coliform

6. Pacific Ocean Shoreline, Tijuana HU, at Monument Road for fecal coliform and total coliform

7. Pacific Ocean Shoreline, Tijuana HU, at the US Border for enterococcus, fecal coliform, and total coliform

Currently , there is no effective total maximum daily load (TMDL) for the Pacific Ocean near the SBOO. A draft TMDL is under development for the Tijuana River for solids, turbidity, and trash.

E. Other Plans, Policies and Regulations

1. **Secondary Treatment Regulations.** 40 CFR Part 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by the USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations.

2. **Storm Water.** Sewage treatment works with a design flow of 1.0 MGD or greater are required to comply with Water Quality Order No. 97-03-DWQ (NPDES General Permit No. CAS000001), WDRs for Dischargers of Storm Water Associated with Industrial Activity, Excluding Construction Activities.

3. **Pretreatment.** Discharges of pollutants that may interfere with operations of a POTW are regulated by USEPA's pretreatment regulations at 40 CFR 403. These regulations require Dischargers to develop and implement pretreatment programs that impose limitations on industrial users of the POTW.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the CFR: 40 CFR 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

This Order retains the discharge prohibitions from Order No. R9-2006-0067, as described below. Compliance determination language is included in section VII of this Order to accurately describe how violations of these prohibitions are determined. Discharges from the Facility to surface waters in violation of prohibitions contained in this Order are violations of the CWA and therefore are subject to third party lawsuits. Discharges from the Facility to land in violation of prohibitions contained in this Order are violations of the Water Code and are not subject to third

party lawsuits under the CWA because the Water Code does not contain provisions allowing third party lawsuits.

1. Prohibitions III.A of this Order is retained from Order No. R9-2006-0067. Prohibition III.A was included in Order No. R9-2006-0067 to clearly define what types of discharges are prohibited.

2. Order No. R9-2006-0067 included discharge prohibitions of the Basin Plan and the Ocean Plan, which are now included in the Order as Prohibitions III.B and C.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 CFR Part 133.

Regulations promulgated in 40 CFR 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in 40 CFR 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the USEPA Administrator.

Based on this statutory requirement, USEPA developed secondary treatment regulations, which are specified in 40 CFR Part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD_5, TSS, and pH.

2. Applicable Technology-Based Effluent Limitations

a. **Federal Regulations.** 40 CFR Part 133 establishes the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD_5 and TSS, states that the 30-day average percent removal of BOD_5 and TSS shall not be less than 85 percent, and requires that pH be maintained between 6.0 and 9.0 standard units. These limitations were included in Order No. R9-2006-0067 and are carried over to this Order.

This Order does not retain the instantaneous maximum effluent limitations for BOD_5 and TSS contained in Order No. R9-2006-0067 and the previous permit for the Discharger which were established using best professional judgment. Recent attempts to derive instantaneous maximum effluent limitations based on the secondary treatment standards at 40 CFR 133 using appropriate statistical approaches did not yield similar results as the previous instantaneous maximum effluent limitations; therefore, based on this new

information, retaining the previous instantaneous maximum effluent limitations for BOD_5 and TSS in Order No. R9-2013-0006 is not supported.

Technology-based effluent limitations based on secondary treatment standards for BOD_5, TSS, and pH are summarized in the following table.

Table F-5. Summary of Technology-Based Effluent Limitations Based on Secondary Treatment Standards

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD_5[1]	mg/L	30	45	--	--	
TSS[1]	mg/L	30	45	--	--	
pH	standard units	--	--	--	6.0	9.0

[1] The average monthly percent removal of $CBOD_5$ and TSS shall not be less than 85 percent.

b. Ocean Plan. The Ocean Plan is applicable, in its entirety, to point source discharges to the ocean. Therefore, the discharge of wastewater to the Pacific Ocean at Discharge Point No. 001 is subject to the Ocean Plan.

The Ocean Plan establishes water quality objectives, general requirements for management of waste discharged to the ocean, effluent quality requirements for waste discharges, discharge prohibitions, and general provisions. Further, Table A of the Ocean Plan establishes TBELs for POTWs and industrial discharges for which Effluent Limitation Guidelines have not been established pursuant to Sections 301, 302, or 306 of the Federal Clean Water Act (summarized in Table F-6 below). Order No. R9-2006-0067, established numeric effluent limitations based on Table A of the Ocean Plan.

Because secondary treatment standards contain effluent limitations for TSS that are more stringent than Table A of the Ocean Plan, the more stringent effluent limitations for TSS will be applied to discharges from the Facility.

Order No. R9-2006-0067 established an average weekly effluent limitation of 2 ml/L for settleable solids due to rounding. The rounding of this number increased the effluent limitation by 33.3 percent over the applicable water quality objective. This Order establishes an average weekly effluent limitation of 1.5 ml/L for settleable solids, consistent with the limitations contained in the Ocean Plan.

With the exception of the average weekly effluent limitation for settleable solids as described above, effluent limitations based on Table A of the Ocean Plan for oil and grease, settleable solids, turbidity, and pH have been carried over from Order No. R9-2006-0067 to this Order.

Table F-6. Summary of Technology-Based Effluent Limitations Based on Table A of the Ocean Plan

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	25	40	--	--	75

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Suspended Solids	mg/L	60[1]	--	--	--	--
	% Removal	[1]	--	--	--	--
Settleable Solids	mL/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
pH	standard units	--	--	--	6.0	9.0

[1] Table A of the Ocean Plan requires that the Discharger shall, as a monthly average, remove 75 percent of suspended solids from the influent stream before discharging wastewater to the Pacific Ocean, except that the effluent limitation to be met shall not be less than 60 mg/L. Secondary treatment standards are more stringent than this limitation and have been applied in the Order.

c. Effluent Flow. The current maximum permitted flow is a calendar-monthly average flow of 15.0 MGD based on the design capacity. This effluent limit is being carried over from Order No. R9-2006-0067 to this Order.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

40 CFR 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs is intended to protect the designated uses of the receiving water as specified in the Basin Plan and Ocean Plan and achieve applicable water quality objectives and criteria that are contained in the Ocean Plan.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan and Ocean Plan designate beneficial uses, establishes water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters.

a. Basin Plan. The beneficial uses specified in the Basin Plan applicable to the Pacific Ocean are summarized in section III.C.1 of this Fact Sheet.

The Basin Plan water quality objective for dissolved oxygen applicable to ocean waters is stated as follows: "*The dissolved oxygen concentration in ocean waters shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials*".

The Basin Plan includes water quality objectives for pH applicable to the receiving water. The Basin Plan states, "*The terms and conditions of the State Board's "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan), "Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California" (Thermal Plan), and any revisions thereto are incorporated into this Basin Plan by reference. The terms and conditions of the Ocean Plan and Thermal Plan apply to the ocean waters within this Region.*"

b. Ocean Plan. The beneficial uses specified in the Ocean Plan for the Pacific Ocean are summarized in section III.C.2 of this Fact Sheet. The Ocean Plan also includes water quality objectives for the ocean receiving water for bacterial characteristics, physical characteristics, chemical characteristics, biological characteristics, and radioactivity.

Table B of the Ocean Plan includes the following water quality objectives for toxic pollutants and whole effluent toxicity:

i. 6-month median, daily maximum, and instantaneous maximum objectives for 21 chemicals and chemical characteristics, including total residual chlorine and chronic toxicity, for the protection of marine aquatic life.

ii. 30-day average objectives for 20 non-carcinogenic chemicals for the protection of human health.

iii. 30-day average objectives for 42 carcinogenic chemicals for the protection of human health.

iv. Daily maximum objectives for acute and chronic toxicity.

3. Determining the need for WQBELs

Order No. R9-2006-0067 evaluated the need for effluent limitations for non-conventional and toxic pollutant parameters in Table B of the California Ocean Plan. For this Order, the need for effluent limitations based on water quality objectives in Table B of the Ocean Plan was re-evaluated in accordance with 40 CFR 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to exceed an objective, as outlined in the revised *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, 1991) and the Ocean Plan Reasonable Potential Analysis (RPA) Amendment that was adopted by the State Water Board on April 21, 2005. The statistical approach combines knowledge of effluent variability (as estimated by a coefficient of variation) with the uncertainty due to a limited amount of effluent data to estimate a maximum effluent value at a high level of confidence. This estimated maximum effluent value is based on a lognormal distribution of daily effluent values. Projected receiving water values (based on the estimated maximum effluent value or the reported maximum effluent value and minimum probably initial dilution) can then be compared to the appropriate objective to determine potential for an exceedance of that objective and the need for an

effluent limitation. According to the Ocean Plan amendment, the RPA can yield three endpoints: 1) Endpoint 1, an effluent limitation is required and monitoring is required; 2) Endpoint 2, an effluent limitation is not required and the San Diego Water Board may require monitoring; 3) Endpoint 3, the RPA is inconclusive, monitoring is required, and an existing effluent limitation may be retained or a permit reopener clause may be included to allow inclusion of an effluent limitation if future monitoring warrants the inclusion. Endpoint 3 is typically the result when there are fewer than 16 data points and all are censored data (i.e., below quantitation or method detection levels for an analytical procedure).

The implementation provisions for Table B in section III.C of the Ocean Plan specify that the minimum initial dilution is the lowest average initial dilution within any single month of the year. Dilution estimates are to be based on observed waste flow characteristics, observed receiving water density structure, and the assumption that no currents of sufficient strength to influence the initial dilution process flow across the discharge structure. Before establishing a dilution credit for a discharge, it must first be determined if, and how much, receiving water is available to dilute the discharge. For Order No. R9-2006-0067, the San Diego Water Board, with assistance from the State Water Board, had determined the minimum initial dilution factor (Dm), for the SBOO to be 94.6 to 1. The Discharger has indicated that no additions or modifications to the Facility or the SBOO have been proposed that would alter the previously determined dilution characteristics. Therefore, the current Dm of 94.6 to 1 will be retained in this Order and applied to WQBELs established herein.

Conventional pollutants were not considered as part of the RPA. Technology-based effluent limitations for these pollutants are included in this Order as described in section IV.B of this Fact Sheet.

Using the RPcalc 2.0 software tool developed by the State Water Board for conducting reasonable potential analyses, the San Diego Water Board has conducted the RPA for the constituents listed in Table F-7. For constituents that do not display reasonable potential, this Order includes desirable maximum effluent concentrations which were derived using effluent limitation determination procedures described below and are referred to in this Order as “performance goals”. A narrative limit statement to comply with all Ocean Plan objectives requirements is provided for those parameters not displaying reasonable potential. The Discharger is required to monitor for these constituents as stated in the MRP (Attachment E) in order to gather data for use in reasonable potential analyses for future permit reissuances.

Effluent data provided in the Discharger’s monitoring reports for the Facility from January 2006 through June 2010 were used in the RPA. A minimum probable initial dilution of 94.6 to 1 was considered in this evaluation.

A summary of the RPA results is provided below:

Table F-7. RPA Results Summary

Parameter	Units	n[1]	MEC[2,4]	Most Stringent Criteria	Background	RPA Endpoint[3]
Arsenic	µg/L	52	2.185	8[5]	3[6]	2
Cadmium	µg/L	53	1.23	1[5]	0	2
Chromium, Total Recoverable	µg/L	53	5.0	2[5]	0	2
Copper	µg/L	51	50.7	3[5]	2[6]	2
Lead	µg/L	51	10.8	2[5]	0	2
Mercury	µg/L	51	0.2265	0.04[5]	0.0005[6]	2
Nickel	µg/L	51	31.1	5[5]	0	2
Selenium	µg/L	51	2.75	15[5]	0	2
Silver	µg/L	51	0.95	0.7[5]	0.16[6]	2
Zinc	µg/L	51	46.6	20[5]	8[6]	2
Cyanide	µg/L	51	4.745	1[5]	0	2
Total Residual Chlorine[10]	µg/L	1,333	2,940	2[5]	0	1
Ammonia	µg/L	53	41,500	600[5]	0	2
Acute Toxicity[11]	TUa	30	14.5	0.3[7]	0	2
Chronic Toxicity[12]	TUc	85	95.2	1[7]	0	2
Phenolic Compounds[13]	µg/L	350	32.7	30[5]	0	2
Chlorinated Phenolics[14]	µg/L	250	<1.2	1[5]	0	2
Endosulfan	µg/L	147	0.008	0.009[5]	0	2
Endrin	µg/L	49	0.006	0.002[5]	0	2
HCH	µg/L	198	0.019	0.004[5]	0	2
Radioactivity	pCi/L	--	--	[8]	0	--
Acrolein	µg/L	17	< 1.3	220[9]	0	2
Antimony	µg/L	51	3.8	1,200[9]	0	2
Bis(2-chloroethoxyl)methane	µg/L	17	< 1.01	4.4[9]	0	2
Bis(2-chloroisopropyl)ether	µg/L	17	< 1.16	1,200[9]	0	2
Chlorobenzene	µg/L	17	< 0.4	570[9]	0	2
Chromium (III)[15]	µg/L	NA	NA	190,000[9]	0	3
Di-n-butyl phthalate	µg/L	17	< 3.96	3,500[9]	0	2
Dichlorobenzenes	µg/L	36	<0.4	5,100[9]	0	2
Diethyl phthalate	µg/L	17	5	33,000[9]	0	2
Dimethyl phthalate	µg/L	17	< 1.44	820,000[9]	0	2
4,6-Dinitro-2-methylphenol	µg/L	50	< 1.52	220[9]	0	2
2,4-Dinitrophenol	µg/L	50	<2.16	4.0[9]	0	2
Ethylbenzene	µg/L	17	2.2	4,100[9]	0	2
Fluoranthene	µg/L	17	1.33	15[9]	0	2
Hexachlorocyclopentadiene	µg/L	17	1.25	58[9]	0	2
Nitrobenzene	µg/L	17	< 1.52	4.9[9]	0	2
Thallium	µg/L	52	3.9	2[9]	0	2
Toluene	µg/L	17	14.45	85,000[9]	0	2
Tributyltin	µg/L	17	2	0.0014[9]	0	2
1,1,1-Trichloroethane	µg/L	17	< 0.4	540,000[9]	0	2
Acrylonitrile	µg/L	17	< 0.7	0.10[9]	0	2
Aldrin	µg/L	49	< 0.007	0.000022[9]	0	3
Benzene	µg/L	17	< 0.4	5.9[9]	0	2
Benzidine	µg/L	16	< 1.02	0.000069[9]	0	3
Beryllium	µg/L	51	0.043	0.033[9]	0	2
Bis(2-chloroethyl) ether	µg/L	17	< 1.38	0.045[9]	0	2
Bis(2-ethylhexyl) phthalate	µg/L	17	12.9	3.5[9]	0	2
Carbon tetrachloride	µg/L	17	< 0.4	0.90[9]	0	2
Chlordane	µg/L	98	< 0.003	0.000023[9]	0	3

Parameter	Units	n[1]	MEC[2,4]	Most Stringent Criteria	Background	RPA Endpoint[3]
Chlorodibromomethane	µg/L	17	<0.6	8.6[9]	0	2
Chloroform	µg/L	18	4.515	130[9]	0	2
DDT	µg/L	294	< 0.007	0.00017[9]	0	2
1,4-Dichlorobenzene	µg/L	18	3.34	18[9]	0	2
3,3-Dichlorobenzidine	µg/L	16	< 2.43	0.0081[9]	0	3
1,2-Dichloroethane	µg/L	17	< 0.5	28[9]	0	2
1,1-Dichloroethylene	µg/L	17	< 0.4	0.9[9]	0	2
Dichlorobromomethane	µg/L	17	0.6	6.2[9]	0	2
Dichloromethane	µg/L	NA	NA	450[9]	0	3
1,3-Dichloropropene	µg/L	34	< 0.3	8.9[9]	0	2
Dieldrin	µg/L	49	< 0.003	0.00004[9]	0	2
2,4-Dinitrotoluene	µg/L	17	< 1.36	2.6[9]	0	2
1,2-Diphenylhydrazine	µg/L	17	< 1.37	0.16[9]	0	2
Halomethanes	µg/L	52	4.515	130[9]	0	2
Heptachlor	µg/L	49	< 0.008	0.00005[9]	0	3
Heptachlor Epoxide	µg/L	49	< 0.004	0.00002[9]	0	3
Hexachlorobenzene	µg/L	17	< 1.48	0.00021[9]	0	3
Hexachlorobutadiene	µg/L	17	< 1.64	14[9]	0	2
Hexachloroethane	µg/L	17	< 1.32	2.5[9]	0	2
Isophorone	µg/L	17	< 1.53	730[9]	0	2
N-nitrosodimethylamine	µg/L	17	< 1.27	7.3[9]	0	2
N-nitrosodi-N-propylamine	µg/L	17	< 1.16	0.38[9]	0	2
N-nitrosodiphenylamine	µg/L	17	< 2.96	2.5[9]	0	2
PAHs	µg/L	187	< 1.01	0.0088[9]	0	3
PCBs	µg/L	343	< 0.36	0.000019[9]	0	3
TCDD equivalents	pg/L	765	<90	0.0000039[9]	0	3
1,1,2,2-Tetrachoroethane	µg/L	17	0.775	2.3[9]	0	2
Tetrachloroethylene	µg/L	17	< 1.0	2.0[9]	0	2
Toxaphene	µg/L	49	< 0.33	0.00021[9]	0	3
Trichloroethylene	µg/L	17	< 0.7	27[9]	0	2
1,1,2-Trichloroethane	µg/L	17	< 0.5	9.4[9]	0	2
2,4,6-Trichlorophenol	µg/L	50	< 1.65	0.29[9]	0	2
Vinyl Chloride	µg/L	17	< 0.4	36[9]	0	2

1 Number of data points available for the RPA.
2 If there is a detected value, the highest reported value is summarized in the table. If there are no detected values, the lowest MDL is summarized in the table.
3 End Point 1 – RP determined, limit required, monitoring required.
End Point 2 – Discharger determined not to have RP, monitoring may be established.
End Point 3 – RPA was inconclusive, carry over previous limitations if applicable, and establish monitoring.
4 Note that the reported MEC does not account for dilution. The RPA does account for dilution; therefore it is possible for a parameter with an MEC in exceedance of the most stringent criteria not to present a RP (i.e. Endpoint 2).
5 Based on the 6-Month Median in the Table B of the Ocean Plan.
6 Background concentrations contained in Table C of the Ocean Plan.
7 Based on the Daily Maximum in Table B of the Ocean Plan.
8 Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations. Levels of radioactivity that exceed the applicable criteria are not expected in the discharge.
9 Based on 30-Day Average in Table B of the Ocean Plan.
10 The facility does not utilize chlorine.
11 Includes results provided for Topsmelt survival and Mysid survival.
12 Includes results for Giant Kelp (germination and growth), Red Abalone (exclusive and inclusive), and

Parameter	Units	n[1]	MEC[2,4]	Most Stringent Criteria	Background	RPA Endpoint[3]

Topsmelt (survival and growth).

13 Non-chlorinated phenolic compounds represent the sum of 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,3-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitropheneol, 4-nitrophenol, and phenol.

14 Chlorinated phenolic compounds represent the sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

15 Chromium data was reported as Total Chromium and is summarized under Chromium (VI).

Consistent with 40 CFR 122.44(I)(2)(i)(B), effluent limitations from Order No. R9-2006-0067 will not be retained for constituents for which the RPA results indicated Endpoint 2. Instead, performance goals have been assigned for these constituents. Parameters for which Endpoint 2 was concluded are determined not to have reasonable potential, thus it is inappropriate to establish effluent limitations for these parameters. Endpoint 2 was concluded for total recoverable copper, thus effluent limitations for total recoverable copper were replaced by performance goals.

For parameters for which Endpoint 3 was concluded, reasonable potential was inconclusive. For parameters for which Endpoint 3 was concluded and previous effluent limitations had not been established, performance goals have been retained. For parameters for which new data is available and reasonable potential cannot be determined, effluent limitations have been retained. The monitoring and reporting program (MRP) in Attachment E of this Order is intended to facilitate collection of additional information for these constituents to determine if reasonable potential exists in future permit reissuances and/or updates.

Reasonable potential to cause or contribute to an exceedance of water quality objectives contained within the Ocean Plan (i.e. Endpoint 1) was determined for total residual chlorine, thus effluent limitations for total residual chlorine have been retained from Order No. R9-2006-0067. The effluent limitations were based on the minimum probable dilution of 94.6 to 1, as discussed below.

4. WQBEL Calculations

a. From the Table B water quality objectives of the Ocean Plan, effluent limitations and performance goals are calculated according to the following equation for all pollutants, except for acute toxicity (if applicable) and radioactivity:

Ce = Co + Dm (Co – Cs) where,

Ce = the effluent limitation (µg/L)
Co = the water quality objective to be met at the completion of initial dilution (µg/L)
Cs = background seawater concentration
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

b. As discussed in Section IV.C.3 above, the Dm has been determined to be 94.6 to 1 by the San Diego Water Board through the application of USEPA's dilution model, Visual Plumes.

c. Table C of the Ocean Plan establishes background concentrations for some pollutants to be used when determining reasonable potential (represented as "Cs"). In accordance with Table B implementing procedures, Cs equals zero for all pollutants not established in Table C. The background concentrations provided in Table C are summarized below:

Table F-8. Pollutants Having Background Concentrations

Pollutant	Background Seawater Concentration
Arsenic	3 µg/L
Copper	2 µg/L
Mercury	0.0005 µg/L
Silver	0.16 µg/L
Zinc	8 µg/L

d. As an example of how effluent limitations and performance goals have been calculated, the effluent limitations for total residual chlorine are determined as follows:

Water quality objectives from the Ocean Plan for total residual chlorine are:

Table F-9. Example Parameter Water Quality Objectives

Parameter	Units	6-Month Median	Daily Maximum	Instantaneous Maximum
Total Residual Chlorine	µg/L	2	8	60

Using the equation, Ce = Co + Dm (Co – Cs), effluent limitations/performance goals are calculated as follows.

Total Residual Chlorine

Ce = 2 + 94.6 (2 – 0) = 191.2 µg/L (6-Month Median)
Ce = 8 + 94.6 (8 – 0) = 764.8 µg/L (Daily Maximum)
Ce = 60 + 94.6 (60 – 0) = 5,736 µg/L (Instantaneous Maximum)

Due to rounding to two significant figures, Order No. R9-2006-0067 established effluent limitations for total residual chlorine slightly lower than the calculated effluent limitations presented above. Consistent with State and federal anti-backsliding regulations, this Order establishes a 6-month median effluent limitation of 190 µg/L, a daily maximum effluent limitation of 760 µg/L, and an instantaneous maximum effluent limitation of 5,700 µg/L.

Based on the implementing procedures described above, effluent limitations and performance goals have been calculated for all Table B pollutants from the California Ocean Plan and incorporated into this Order.

e. 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. However, Section IIIC.4.j of the Ocean Plan requires that mass limitations be established for all Table B parameters. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations

provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations were calculated using the following equation:

lbs/day = permitted flow (MGD) x pollutant concentration (mg/L) x 8.34

where the Facility permitted flow of 15 MGD was used.

f. A summary of the WQBELs established in this Order are provided below, in Table F-10:

Table F-10. Summary of Water Quality-based Effluent Limitations, Discharge Point No. 001

Parameter	Units	Effluent Limitations			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
BASED ON OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Chlorine, Total Residual	µg/L	190	760	5,700	--
	lbs/day	24	96	720	--

g. A summary of the performance goals is provided below, in Table F-11.

Table F-11. Summary of Performance Goals

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE					
Arsenic, Total Recoverable	ug/L	4.8E+02	2.8E+03	7.4E+03	--
	lbs/d	6.0E+01	3.5E+02	9.2E+02	--
Cadmium, Total Recoverable	ug/L	9.6E+01	3.8E+02	9.6E+02	--
	lbs/d	1.2E+01	4.8E+01	1.2E+02	--
Chromium VI, Total Recoverable [2]	ug/L	1.9E+02	7.6E+02	1.9E+03	--
	lbs/d	2.4E+01	9.6E+01	2.4E+02	--
Copper, Total Recoverable	ug/L	9.8E+01	9.6E+02	2.7E+03	--
	lbs/d	1.2E+01	1.2E+02	3.4E+02	--
Lead, Total Recoverable	ug/L	1.9E+02	7.6E+02	1.9E+03	--
	lbs/d	2.4E+01	9.6E+01	2.4E+02	--
Mercury, Total Recoverable	ug/L	3.8E+00	1.5E+01	3.8E+01	--
	lbs/d	4.7E-01	1.9E+00	4.8E+00	--
Nickel, Total Recoverable	ug/L	4.8E+02	1.9E+03	4.8E+03	--
	lbs/d	6.0E+01	2.4E+02	6.0E+02	--
Selenium, Total Recoverable	ug/L	1.4E+03	5.7E+03	1.4E+04	--
	lbs/d	1.8E+02	7.2E+02	1.8E+03	--

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Silver, Total Recoverable	ug/L	5.2E+01	2.5E+02	6.5E+02	--
	lbs/d	6.5E+00	3.2E+01	8.2E+01	--
Zinc, Total Recoverable	ug/L	1.2E+03	6.9E+03	1.8E+04	--
	lbs/d	1.4E+02	8.6E+02	2.3E+03	--
Cyanide, Total Recoverable	ug/L	9.6E+01	3.8E+02	9.6E+02	--
	lbs/d	1.2E+01	4.8E+01	1.2E+02	--
Ammonia (expressed as nitrogen)	ug/L	5.7E+04	2.3E+05	5.7E+05	--
	lbs/d	7.2E+03	2.9E+04	7.2E+04	--
Chronic Toxicity	TUc	--	96	--	--
Phenolic Compounds (non-chlorinated)[3]	ug/L	2.9E+03	1.1E+04	2.9E+04	--
	lbs/d	3.6E+02	1.4E+03	3.6E+03	--
Chlorinated Phenolics[4]	ug/L	9.6E+01	3.8E+02	9.6E+02	--
	lbs/d	1.2E+01	4.8E+01	1.2E+02	--
Endosulfan	ug/L	8.6E-01	1.7E+00	2.6E+00	--
	lbs/d	1.1E-01	2.2E-01	3.2E-01	--
Endrin	ug/L	1.9E-01	3.8E-01	5.7E-01	--
	lbs/d	2.4E-02	4.8E-02	7.2E-02	--
HCH	ug/L	3.8E-01	7.6E-01	1.1E+00	--
	lbs/d	4.8E-02	9.6E-02	1.4E-01	--
Radioactivity	pCi/L	Not to exceed limits specified in Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 3, Section 30253 of the California Code of Regulations, Reference to Section 30253 is prospective, including future changes to any incorporated provisions of federal law, as the changes take effect.			
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – NONCARCINOGENS					
Acrolein	µg/L	--	--	--	2.1E+04
	lbs/day	--	--	--	2.6E+03
Antimony	µg/L	--	--	--	1.1E+05
	lbs/day	--	--	--	1.4E+04
Bis(2-chloroethoxy) Methane	µg/L	--	--	--	4.2E+02
	lbs/day	--	--	--	5.3E+01
Bis(2-chloroisopropyl) Ether	µg/L	--	--	--	1.1E+05
	lbs/day	--	--	--	1.4E+04
Chlorobenzene	µg/L	--	--	--	5.4E+04
	lbs/day	--	--	--	6.8E+03
Chromium (III), Total Recoverable[2]	µg/L	--	--	--	1.8E+07
	lbs/day	--	--	--	2.3E+06
Di-n-butyl Phthalate	µg/L	--	--	--	3.3E+05
	lbs/day	--	--	--	4.2E+04

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Dichlorobenzenes	µg/L	--	--	--	4.9E+05
	lbs/day	--	--	--	6.1E+04
Diethyl Phthalate	µg/L	--	--	--	3.2E+06
	lbs/day	--	--	--	3.9E+05
Dimethyl Phthalate	µg/L	--	--	--	7.8E+07
	lbs/day	--	--	--	9.8E+06
4,6-dinitro-2-methylphenol	µg/L	--	--	--	2.1E+04
	lbs/day	--	--	--	2.6E+03
2,4-dinitrophenol	µg/L	--	--	--	3.8E+02
	lbs/day	--	--	--	4.8E+01
Ethylbenzene	µg/L	--	--	--	3.9E+05
	lbs/day	--	--	--	4.9E+04
Fluoranthene	µg/L	--	--	--	1.4E+03
	lbs/day	--	--	--	1.8E+02
Hexachlorocyclopentadiene	µg/L	--	--	--	5.5E+03
	lbs/day	--	--	--	6.9E+02
Nitrobenzene	µg/L	--	--	--	4.7E+02
	lbs/day	--	--	--	5.9E+01
Thallium, Total Recoverable	µg/L	--	--	--	1.9E+02
	lbs/day	--	--	--	2.4E+01
Toluene	µg/L	--	--	--	8.1E+06
	lbs/day	--	--	--	1.0E+06
Tributyltin	µg/L	--	--	--	1.3E-01
	lbs/day	--	--	--	1.7E-02
1,1,1-trichloroethane	µg/L	--	--	--	5.2E+07
	lbs/day	--	--	--	6.5E+06
OBJECTIVES FOR PROTECTION OF HUMAN HEALTH – CARCINOGENS					
Acrylonitrile	µg/L	--	--	--	9.6E+00
	lbs/day	--	--	--	1.2E+00
Aldrin	µg/L	--	--	--	2.1E-03
	lbs/day	--	--	--	2.6E-04
Benzene	µg/L	--	--	--	5.6E+02
	lbs/day	--	--	--	7.1E+01
Benzidine	µg/L	--	--	--	6.6E-03
	lbs/day	--	--	--	8.3E-04
Beryllium	µg/L	--	--	--	3.2E+00
	lbs/day	--	--	--	3.9E-01

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Bis(2-chloroethyl) Ether	µg/L	--	--	--	4.3E+00
	lbs/day	--	--	--	5.4E-01
Bis(2-ethlyhexyl) Phthalate	µg/L	--	--	--	3.3E+02
	lbs/day	--	--	--	4.2E+01
Carbon Tetrachloride	µg/L	--	--	--	8.6E+01
	lbs/day	--	--	--	1.1E+01
Chlordane	µg/L	--	--	--	2.2E-03
	lbs/day	--	--	--	2.8E-04
Chlorodibromomethane	µg/L	--	--	--	8.2E+02
	lbs/day	--	--	--	1.0E+02
Chloroform	µg/L	--	--	--	1.2E+04
	lbs/day	--	--	--	1.6E+03
DDT	µg/L	--	--	--	1.6E-02
	lbs/day	--	--	--	2.0E-03
1,4-dichlorobenzene	µg/L	--	--	--	1.7E+03
	lbs/day	--	--	--	2.2E+02
3,3'-dichlorobenzidine	µg/L	--	--	--	7.7E-01
	lbs/day	--	--	--	9.7E-02
1,2-dichloroethane	µg/L	--	--	--	2.7E+03
	lbs/day	--	--	--	3.3E+02
1,1-dichloroethylene	µg/L	--	--	--	8.6E+01
	lbs/day	--	--	--	1.1E+01
Dichlorobromomethane	µg/L	--	--	--	5.9E+02
	lbs/day	--	--	--	7.4E+01
Dichloromethane	µg/L	--	--	--	4.3E+04
	lbs/day	--	--	--	5.4E+03
1,3-dichloropropene	µg/L	--	--	--	8.5E+02
	lbs/day	--	--	--	1.1E+02
Dieldrin	µg/L	--	--	--	3.8E-03
	lbs/day	--	--	--	4.8E-04
2,4-dinitrotoluene	µg/L	--	--	--	2.5E+02
	lbs/day	--	--	--	3.1E+01
1,2-diphenylhydrazine	µg/L	--	--	--	1.5E+01
	lbs/day	--	--	--	1.9E+00
Halomethanes	µg/L	--	--	--	1.2E+04
	lbs/day	--	--	--	1.6E+03
Heptachlor	µg/L	--	--	--	4.8E-03
	lbs/day	--	--	--	6.0E-04

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average
Heptachlor Epoxide	µg/L	--	--	--	1.9E-03
	lbs/day	--	--	--	2.4E-04
Hexachlorobenzene	µg/L	--	--	--	2.0E-02
	lbs/day	--	--	--	2.5E-03
Hexachlorobutadiene	µg/L	--	--	--	1.3E+03
	lbs/day	--	--	--	1.7E+02
Hexachloroethane	µg/L	--	--	--	2.4E+02
	lbs/day	--	--	--	3.0E+01
Isophorone	µg/L	--	--	--	7.0E+04
	lbs/day	--	--	--	8.7E+03
N-nitrosodimethylamine	µg/L	--	--	--	7.0E+02
	lbs/day	--	--	--	8.7E+01
N-nitrosodi-N-propylamine	µg/L	--	--	--	3.6E+01
	lbs/day	--	--	--	4.5E+00
N-nitrosodiphenylamine	µg/L	--	--	--	2.4E+02
	lbs/day	--	--	--	3.0E+01
PAHs	µg/L	--	--	--	8.4E-01
	lbs/day	--	--	--	1.1E-01
PCBs	µg/L	--	--	--	1.8E-03
	lbs/day	--	--	--	2.3E-04
TCDD Eqivalents	µg/L	--	--	--	3.7E-07
	lbs/day	--	--	--	4.7E-08
1,1,2,2-tetrachloroethane	µg/L	--	--	--	2.2E+02
	lbs/day	--	--	--	2.8E+01
Tetrachloroethylene	µg/L	--	--	--	1.9E+02
	lbs/day	--	--	--	2.4E+01
Toxaphene	µg/L	--	--	--	2.0E-02
	lbs/day	--	--	--	2.5E-03
Trichloroethylene	µg/L	--	--	--	2.6E+03
	lbs/day	--	--	--	3.2E+02
1,1,2-trichloroethane	µg/L	--	--	--	9.0E+02
	lbs/day	--	--	--	1.1E+02
2,4,6-trichlorophenol	µg/L	--	--	--	2.8E+01
	lbs/day	--	--	--	3.5E+00
Vinyl Chloride	µg/L	--	--	--	3.4E+03
	lbs/day	--	--	--	4.3E+02

[1] Scientific "E" notation is used to express certain values. In scientific "E" notation, the number following the "E" indicates that position of the decimal point in the value. Negative numbers after the "E" indicate that the value is less than 1, and positive numbers after the "E" indicate that the value is greater than 1. In this notation a value of 6.1E-02

Parameter	Unit	Performance Goals[1]			
		6-Month Median	Maximum Daily	Instantaneous Maximum	30-Day Average

represents 6.1 x 10^{-2} or 0.061, 6.1E+02 represents 6.1 x 10^{2} or 610, and 6.1E+00 represents 6.1 x 10^{0} or 6.1.

2 The Discharger~~s~~ may, at their option, apply this performance goal as a total chromium performance goal.

3 Non-chlorinated phenolic compounds represent the sum of 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-methylphenol, 4-methylphenol, 2-nitrophenol, 4-nitrophenol, and phenol.

4 Chlorinated phenolic compounds represent the sum of 4-chloro-3-methylphenol, 2-chlorophenol, pentachlorophenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

5. Whole Effluent Toxicity (WET)

a. Implementing provisions at section III.C.4.c.(4) of the Ocean Plan states that the Discharger shall conduct chronic toxicity monitoring for ocean waste discharges with minimum initial dilution factors that fall below 100:1. Using monthly chronic WET testing data over the term of the previous Order, the RPA resulted in Endpoint 2, and an effluent limitation for chronic toxicity is not required. However, consistent with the approach for other Table B parameters, a performance goal for chronic toxicity has been included in this Order. In addition, the monitoring frequency has been reduced from monthly to quarterly.

b. The previous Order required acute toxicity testing in addition to chronic toxicity monitoring. The RPA for acute toxicity summarized in Table F-7 of this Fact resulted in Endpoint 2, and an effluent limitation for acute toxicity is not required. Further, the Ocean Plan does not require acute toxicity monitoring for dischargers with a minimum initial dilution factors less than 100:1. The Discharger has been granted a dilution ratio of 94.6:1 at Discharge Point No. 001 and the results of the RPA do not indicate reasonable potential for chronic or acute toxicity; therefore the existing performance goals and monitoring for acute toxicity are not being carried over to this Order.

D. Final Effluent Limitations

The following tables list the effluent limitations established by this Order. These effluent limitations, including mass emission rate (MER) effluent limitations apply year round. Where this Order establishes MERs, these limitations have been derived based on flows of 15 MGD.

Table F-12. Final Technology-based Effluent Limitations.

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
BOD_5[1]	mg/L	30	45	--	--		--
	lbs/day	3,753	5,630	--	--	6,255	--
TSS[1]	mg/L	30	45	--	--		--
	lbs/day	3,753	5,630	--	--	6,255	--
Oil and Grease	mg/L	25	40	--	--	75	--
	lbs/day	3,128	5,004	--	--	9,383	--
Settleable Solids	ml/L	1.0	1.5	--	--	3.0	--
Turbidity	NTU	75	100	--	--	225	--
pH	standard units	--	--	--	6.0	9.0	--

[1] The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent.

Table F-13. Final Water Quality-based Effluent Limitations.

Parameter	Units	Effluent Limitations					
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	6-Month Median
BASED ON OBJECTIVES FOR PROTECTION OF MARINE AQUATIC LIFE							
Chlorine, Total Residual[1]	µg/L	--	--	760	--	5,700	190
	lbs/day	--	--	96	--	718	24

[1] The water quality objectives for total chlorine residual applicable to intermittent discharges not exceeding two hours, shall be determined through the use of the following equation:

log y =0.43 (log x) + 1.8,
where y =the water quality objective (in µg/l) to apply when chlorine is being discharged;
x =the duration of uninterrupted chlorine discharge in minutes.

Actual effluent limitations for total chlorine, when discharging intermittently, shall then be determined according to Implementation Procedures for Table B from the Ocean Plan, using a minimum probable initial dilution factor of 94.6 and a flow rate of 15 MGD.

1. Satisfaction of Anti-Backsliding Requirements

As discussed in section IV.C.3 of this Fact Sheet, effluent limitations from Order No. R9-2006-0067 are not retained for constituents for which RPA results indicated Endpoint 2 (copper, total recoverable). Instead, performance goals have been assigned for these constituents. Parameters for which Endpoint 2 was concluded are determined not to have reasonable potential, thus it is inappropriate to establish effluent limitations for these parameters. For parameters for which Endpoint 3 was concluded and previous effluent limitations had not been established, reasonable potential was not determined. The MRP for this Order is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit reissuances and/or updates.

As explained in Section IV.B.2.a of this Fact Sheet, instantaneous maximum effluent limitations for BOD_5 and TSS were not carried over to this Order. The average monthly and average weekly effluent limitations (AMEL and AWEL) for BOD5 and TSS, however, have been retained in this Order. The AMEL and AWEL are expected to ensure the Discharger maintains the same level of treatment and no degradation of the effluent quality is expected. Thus, the removal of the instantaneous maximum effluent limitations for BOD5 and TSS is consistent with federal anti-backsliding requirements.

This permit complies with all applicable federal and State anti-backsliding regulations.

2. Satisfaction of Antidegradation Policy

WDRs for the Discharger must conform with federal and State antidegradation policies provided at 40 CFR 131.12 and in State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. The antidegradation policies require that beneficial uses and the water quality necessary to maintain those beneficial uses in the receiving waters of the discharge shall be maintained and protected, and, if existing water quality is better than the quality required to maintain beneficial uses, the existing water quality shall be maintained and protected unless allowing a lowering of water quality is necessary to accommodate important economic and social development or consistent with maximum benefit to the people of California. When a significant lowering of water quality is allowed by the San Diego Water Board, an antidegradation analysis is required in accordance with the State Water Board's Administrative Procedures Update (July 2, 1990), *Antidegradation Policy Implementation for NPDES Permitting*.

a. Technology-based Effluent Limitations (TBELs)

As explained in Section IV.B.2.a of this Fact Sheet, this Order does not retain the instantaneous maximum effluent limitations for BOD_5 and TSS contained in Order No. R9-2006-0067. The AMEL and AWEL for BOD_5 and TSS, however, have been retained in this Order. The AMEL and AWEL are expected to ensure the Discharger maintains the same level of treatment and no degradation of the receiving water is expected. Thus, the removal of the instantaneous maximum effluent limitations for BOD_5 and TSS is consistent with State and federal antidegradation policy.

The concentration-based TBELs for oil and grease, settleable solids, turbidity, and pH contained in Order No. R9-2006-0067 have been retained in this Order.

Corresponding MERs, however, were not established in Order No. R9-2006-0067. Consistent with concentration limitations and in accordance with 40 CFR 122.45(f)(2), this Order applies effluent MERs based on Table A and secondary treatment standards. The new MERs ensure proper performance of the Facility.

The TBELs, with the exception of the instantaneous maximum effluent limitations for BOD5 and TSS as explained above, are at least as stringent as the previous effluent limitations, and no degradation of the receiving water is expected.

b. Water Quality-based Effluent Limitations

Some WQBELs contained in this Order are less stringent than those contained in Order No. R9-2006-0067. Effluent limitations from Order No. R9-2006-0067 are not retained

for constituents for which RPA results indicated Endpoint 2 (copper, total recoverable). For parameters for which new data is available, and reasonable potential is not determined, effluent limitations have been removed as allowed under 40 CFR 122.44(l)(2)(i)(B), and performance goals have been established in their place. The MRP for this Order is designed to obtain additional information for these constituents to determine if reasonable potential exists for these constituents in future permit reissuances and/or updates.

3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on BOD_5, TSS, oil and grease, settleable solids, turbidity, and pH. Restrictions on these constituents are discussed in section IV.B of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. The scientific procedures for calculating the individual WQBELs are based on the Ocean Plan, which was approved by USEPA on October 18, 2010. Most beneficial uses and water quality objectives contained in the Basin Plan and Ocean Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Water quality objectives contained in the Ocean Plan submitted to EPA after May 30, 2000 have subsequently been approved by EPA, and are applicable water quality standards pursuant to section 131.2(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Performance Goals

Constituents that do not display reasonable potential to cause or contribute to an exceedance of water quality standards are listed as performance goals in this Order. Performance goals serve to maintain existing treatment levels and effluent quality and support State and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected levels of pollutants in the discharge that should not be exceeded in order to maintain the water quality objectives established in the Ocean Plan. Performance goals are not limitations or standards for the regulation of the discharge. Effluent concentrations above the performance goals will not be considered as violations of the permit but serve as red flags that indicate water quality concerns. Repeated red flags may prompt the San Diego Water Board to reopen and amend the permit to replace performance goals for constituents of concern with effluent limitations, or the San Diego Water Board may coordinate such actions with the next permit reissuance.

A summary of the performance goals are provided in Table F-11 of this Fact Sheet.

F. Interim Effluent Limitations – Not Applicable

G. Land Discharge Specifications – Not Applicable

H. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Receiving water limitations of this Order are derived from the water quality objectives for ocean waters established by the Basin Plan and the Ocean Plan.

Prior to this Order, the San Diego Water Board has interpreted the Bacterial Characteristics Water-contact Standards of the Ocean Plan (Receiving Water Limitations section V.A.1) to apply only in the zone bounded by the shoreline and a distance 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and within kelp beds. The 2009 Ocean Plan also has language that these standards also apply in areas outside this zone used for water contact sports, as determined by the Regional Boards (i.e., waters designated as REC-1). These designations would need to be specified in the Basin Plan. Because the San Diego Water Board has not completed a process to designate specific areas where the water-contact standards apply, Ocean Plan Bacterial Standards apply throughout all ocean waters in the San Diego Region. This interpretation has been confirmed by the USEPA.

By letter dated January 10, 2013, the City provided a tabulation and interpretation of the receiving water monitoring data for the past 17 years. Based on the City's analysis, the bacterial water quality objective exceedances in the receiving waters appear to be linked to the primary treated wastewater discharged from IBWC's SBIWTP rather than the secondary treated wastewater discharged from the City's SBWRP. From 1999 to 2010, the IBWC discharged primary treated wastewater from SBIWTP to the Pacific Ocean via the SBOO. During this same time period, sample results at the three offshore receiving water stations closest to the SBOO ranged from 72 to 94 percent in compliance with bacterial water quality objectives and samples at all the offshore receiving water stations for SBOO ranged from 90 to 95 percent in compliance with bacterial water quality objectives. After IBWC completed the upgrade of the SBIWTP to meet secondary treatment requirements in January, 2011, sample results at the three offshore stations closest to the SBOO were 99 percent in compliance and sample results at all the offshore stations for SBOO were also 99 percent in compliance. The receiving water monitoring results show no change in the compliance with bacterial water quality objectives at the offshore stations for SBOO after the SBWRP began discharging in May, 2002. The San Diego Water Board has concluded that the secondary treated wastewater from SBWRP does not appear to cause or contribute to violations of bacterial objectives in the receiving water. This conclusion is based on 1) the correlation between the historic non-compliance record of bacterial water quality objectives in the receiving water and the formerly primary treated discharge from SBIWTP; 2) the absence of changes to the receiving water bacterial water quality objectives compliance record after the start of the discharge from SBWRP; and 3) SBWRP's near 100 percent compliance record with NPDES permit secondary treatment requirements during the past two years. Thus, the 5-year compliance schedule, that was included in three other recently adopted POTW Ocean Outfall NPDES Permits, is not included in this Order.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the San Diego Water Board to

require technical and monitoring reports. The MRP (Attachment E) of this Order, establishes monitoring and reporting requirements to implement federal and State requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for the Facility.

A. Influent Monitoring

Influent monitoring is required to assess the performance of treatment facilities and to evaluate compliance with effluent limitations. Influent monitoring frequencies and sample types for flow, BOD_5, TSS, and metals have been retained from Order No. R9-2006-0067. Refer to section III.A of Attachment E for a summary of influent monitoring requirements.

B. Effluent Monitoring

Effluent monitoring is required to determine compliance with the permit conditions, to identify operational problems, to improve plant performance, and to conduct reasonable potential analyses for subsequent Orders. Effluent monitoring also provides information on wastewater characteristics for use in interpreting water quality and biological data. Effluent monitoring requirements for all parameters, have been retained from Order No. R9-2006-0067.

For this Order, as amended by Order No. R9-2017-0023, the Discharger may apply the performance goal for both chromium (VI) and chromium (III) as a total chromium performance goal. The Ocean Plan allows dischargers to meet the objective for chromium (VI) as a total chromium objective (footnote a of Table 1 of the Ocean Plan). Total chromium includes both chromium (VI) and chromium (III) and the Clean Water Act has no analytical method for chromium (III)[1]. Thus, this Order allows the Discharger to also meet the objective for chromium (III) as a total chromium objective. If the Discharger monitors for total chromium to meet the objective for both chromium (VI) and chromium (III), the total chromium data will be used to determine if reasonable potential exists for both chromium (VI) and chromium (III) in future permit reissuances and/or updates.

C. Whole Effluent Toxicity Testing Requirements

As described in section IV.C.5 of the Fact Sheet, due to no detected instances of chronic or acute toxicity, acute toxicity monitoring has been removed, and chronic toxicity monitoring has been reduced from monthly to quarterly. This monitoring is sufficient to determine compliance with the performance goal based on Ocean Plan Table B water quality objective for chronic toxicity and to evaluate any potential synergistic effects in the effluent.

D. Land Outfall Monitoring

Since the SBIWTP was upgraded to a secondary treatment wastewater plant and has been in substantial compliance with secondary effluent limitations, there is no longer a need to monitor the combined effluent from SBIWTP and the SBWRP.

[1] In order to obtain a value for chromium (III), two separate methods must be used: one for total chromium determination and one for chromium (VI) determination. The value for chromium (III) is obtained by subtracting the chromium (VI) value from the total chromium value.

E. Receiving Water Monitoring Requirements

The receiving water and sediment monitoring requirements set forth below are designed to measure the effects of the SBOO discharge on the receiving ocean waters. These monitoring requirements will remain in effect on an interim basis, pending development of a new and updated monitoring and assessment programs. The overall receiving water monitoring program is intended to answer the following questions:

(1) Does the receiving water meet water quality standards?

(2) Are the receiving water conditions getting better or worse over time?

(3) What is the relative contribution of the Facility discharge to pollution in the receiving water?

1. ~~Surf Zone~~Shoreline Water Quality Monitoring Requirements

As ocean surface waves come closer to shore they break, forming the foamy, bubbly surface called surf. The region of breaking waves defines the ~~surf zone~~shoreline.

Monitoring of the ~~surf zone~~shoreline is intended to answer the following questions:

(1) Does the effluent cause or contribute to an exceedance of the water quality standards in the receiving water?

(2) Does the effluent reach water contact zones or commercial shellfish beds?

(3) Are densities of bacteria in water contact areas below levels protective of public health?

~~Surf Zone~~Shoreline Station S-1 (located in Mexico near Punta Bandera) was abandoned after August 6, 2002 as a result of legal restrictions that prevented access to this station beginning in July 2002. Consequently, ~~Surf Zone~~shoreline Station S-0 was established to replace S-1 as the southernmost ~~surf zone~~shoreline sampling site for SBOO. Sampling began at S-0 on August 13, 2002. This change was documented in the August 2002 monthly self-monitoring report.

Refer to section VIII.A of Attachment E of this Order for a summary of ~~surf zone~~shoreline water quality monitoring requirements.

2. Offshore Water Quality Monitoring Requirements

Offshore monitoring extends from south of international border to Point Loma. See Attachment B for a map of the offshore monitoring stations.

Offshore monitoring is necessary to answer the following questions:

(1) Is natural light significantly reduced at any point outside the zone of initial dilution as a result of the discharge?

(2) Does the discharge cause a discoloration of the ocean surface?

(3) Does the discharge of oxygen demanding waste cause the dissolved oxygen concentration to be depressed at any time more than 10 percent from that which occurs naturally?

(4) Does the discharge of waste cause the pH to change at any time more than 0.2 units from that which occurs naturally?

(5) Is the wastewater plume encroaching upon receiving water areas used for swimming, surfing, diving and shellfish harvesting?

(6) What is the fate of the discharge plume?

As commissioned by the U.S. Section of the International Boundary and Water Commission (USIBWC), staff at the University of California San Diego, Scripps Institution of Oceanography conducted a study to determine the characteristic fates of the wastewater plume from the SBOO. The results of the study were summarized in *the Final Report Coastal Observations Monitoring in South Bay San Diego*, dated February 25, 2009 (Plume Study). Recommendations from the Plume Study have been included in this Order.

Refer to section VIII.B of Attachment E of this Order for a summary of off shore water quality monitoring requirements.

3. Benthic Community Protection Monitoring Requirements

Sediments integrate constituents that are discharged to the ocean. Most particles that come from the SBOO discharge, and any associated contaminants, will eventually settle to the seafloor where they are incorporated into the existing sediments. Sediments can accumulate these particles over the years until the point where sediment quality has degraded and beneficial uses are impaired.

The MRP requires periodic assessment of sediment quality to evaluate potential effects of the SBOO discharge and compliance with narrative water quality standards specified in the Ocean Plan. The required assessment consists of the measurement and integration of three lines of evidence: 1) physical and chemical properties of seafloor sediments, 2) seafloor sediment toxicity to assess bioavailability and toxicity of sediment contaminants and 3) ecological status of the biological communities (benthos) that live in or on the seafloor sediments.

The benthic community is strongly affected by sediment composition (e.g., sand, silt, and clay distributions), sediment ~~and~~ quality (e.g., chemistry, toxicity), and water quality. ~~Because the benthos are dependent on its surroundings, they serve as a biological indicator that reflects the overall conditions of the aquatic environment.~~ Because benthic macroinvertebrates (e.g., infauna) are dependent on their surroundings, they often serve as important biological indicators that reflect the overall conditions of the marine environment.

Sediment and benthic community monitoring are necessary to answer the following question:

(1) Is the dissolved sulfide concentration of waters in sediments significantly increased above that present under natural conditions?

(2) Is the concentration of substances, set forth in Table 1 of the Ocean Plan for protection of marine aquatic life, in marine sediments at levels which would degrade the benthic community?

(3) Is the concentration of organic pollutants in marine sediments at levels that would degrade the benthic community?

(4) Are benthic communities degraded as a result of the discharge?

(5) Is the sediment quality changing over time?

Refer to section VIII.C of Attachment E of this Order for a summary of sediment and benthic monitoring requirements.

4. Fish and Invertebrate Monitoring Requirements

Many pollutants discharged into receiving waters have the potential to bioaccumulate and persist in tissue of aquatic organisms, including fish. Chemical pollutants that bioaccumulate tend to magnify in concentration as they pass through the aquatic food chain. Fish monitoring data is required to assess the human health risks for individuals who may consume fish and to assess trends of contaminants levels in the receiving water over time.

Marine aquatic~~Aquatic~~ invertebrates are excellent indicators of ecosystem health because they are ubiquitous, abundant, diverse, and typically sedentary. The growth, survival, and reproduction of aquatic invertebrates are all sensitive to declines in environmental health, making analysis of assemblage structure a good ecosystem monitoring tool.

Fish and invertebrate monitoring is necessary to answer the following questions:

(1) Does the concentration of pollutants in fish, shellfish, or other marine organisms used for human consumption bioaccumulate to levels that are harmful to human health?

(2) Does the concentration of pollutants in marine life bioaccumulate to levels that degrade marine communities?

(3) Are the concentrations of pollutants in fish and other marine organisms changing over time?

(4) Is the health of fish changing over time?

(5) Is the population of selected species changing over time?

Refer to section VIII.D of Attachment E of this Order for a summary of fish monitoring requirements.

5. Receiving Water Monitoring Reports

In a letter dated November 5, 2015, the City of San Diego requested modifications to the reporting requirements for the receiving water monitoring for the Point Loma Ocean Outfall (PLOO) and SBOO. Order No. R9-2009-0001 for the PLOO discharge from the E.W. Blom Point Loma Wastewater Treatment Plant and Order No. R9-2013-0006 as amended by Order No. R9-2014-0071 for the SBOO discharge from the SBWRP[2] required the City of San Diego to submit annual full assessment reports, one annual report for PLOO and one annual report for SBOO. The City of San Diego also prepared a separate annual full assessment report for the South Bay International Wastewater Treatment Plant discharge to the SBOO as required by Order No. R9-2014-0009 as amended by Order No. R9-2014-0094. The recently adopted new MRP for the PLOO (Order No. R9-2017-0007)[3] authorizes the City of San Diego to replace the above three

[2] Order No. R9-2013-0006 as amended by Order No. R9-2014-0071, NPDES Permit No. CA0109045, *Waste Discharge Requirements for the City of San Diego South Bay Water Reclamation Plant Discharge to the Pacific Ocean via the South Bay Ocean Outfall*, Monitoring and Reporting Program (Attachment E)

[3] *Order No. R9-2017-0007, NPDES Permit No. CA0107409, Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of San Diego E.W. Blom Point Loma Wastewater Treatment Plant Discharge to the Pacific Ocean Through the Point Loma Ocean Outfall*, Monitoring and Reporting Program *(Attachment E)*

annual reports with Interim Receiving Water Monitoring Reports (Interim Reports, executive summary) and Biennial Receiving Water Monitoring Reports (Biennial Reports, full assessment) submitted in alternating years. The Interim Reports will cover a single monitoring calendar year (e.g., 2018, 2020), will only cover even numbered years, and shall be submitted every other year. The Biennial Receiving Water Monitoring Reports will provide a more thorough discussion, evaluation (e.g., detailed statistical analyses), and interpretation than the Interim Receiving Water Monitoring Reports; will cover two years of receiving water monitoring (e.g., biennial reports for calendar years 2016-2017, 2018-2019, and 2020-2021), and shall be submitted in the opposite years as the Interim Receiving Water Monitoring Reports. Under this approach, every two years, one integrated Interim Report and one integrated Biennial Report covering the receiving water monitoring requirements for both the SBOO and PLOO may be submitted to comply with NPDES Permit reporting requirements. The Discharger must collaborate with the USIBWC in the submittal of the Interim Reports and the Biennial Reports required under this Order. The Discharger shall also collaborate with the USIBWC in providing a Biennial State of the Ocean Report (an oral report) to the San Diego Water Board following each submittal of the Biennial Report. The oral report should focus on the effort completed during the past two years of monitoring, the status of the receiving waters, and plans for future monitoring efforts. If the oral report is not feasible (e.g., board meetings are cancelled or have too many items), a written Biennial State of the Ocean Report may be provided in lieu of an oral report.

Refer to section VII.E of Attachment E of this Order for a summary of fish monitoring requirements.

F. Regional Monitoring Requirements

Regional ocean water monitoring provides information about the sources, fates, and effects of anthropogenic contaminants in the coastal marine environment necessary to make assessments over large areas. The large scale assessments provided by regional monitoring describe and evaluate cumulative effects of all anthropogenic inputs and enable better decision making regarding protection of beneficial uses of ocean waters. Regional monitoring data assists in the interpretation of core monitoring studies by providing a more accurate and complete characterization of reference conditions and natural variability. Regional monitoring also leads to methods standardization and improved quality control through intercalibration exercise. The coalitions implementing regional monitoring enable sharing of technical resources, trained personnel and associated costs. Focusing these resources on regional issues and developing a broader understanding of pollutants effects in ocean waters enables the development of more rapid and effective response strategies. Based on all of these considerations the San Diego Water Board supports regional approaches to monitoring ocean waters.

The Discharger shall, as directed by the San Diego Water Board, participate with other regulated entities, other interested parties, and the San Diego Water Board in development and implementation of new and improved monitoring and assessment programs for ocean waters in the San Diego Region and discharges to those waters. These programs shall be developed and implemented so as to:

(1) Determine the status and trends of conditions in ocean waters in the San Diego Region with regard to beneficial uses, e.g.,

i. Are fish and shellfish safe to eat?

ii. Is water quality safe for swimming?

iii. Are ecosystems healthy?

(2) Identify the primary stressors causing or contributing to conditions of concern;

(3) Identify the major sources of the stressors causing or contributing to conditions of concern; and

(4) Evaluate the effectiveness (i.e., environmental outcomes) of actions taken to address such stressors and sources.

1. Kelp Bed Canopy Monitoring Requirements

Kelp consists of a number of species of brown algae. Along the central and southern California coast, giant kelp (Macrocystis pyrifera) is the largest species colonizing rocky, and in some cases sandy, subtidal habitats. Giant kelp is an important component of coastal and island communities in southern California, providing food and habitat for numerous animals. Monitoring of the kelp beds is necessary to answer the following questions:

(1) What is the maximum areal extent of the coastal kelp bed canopies each year?

(2) What is the variability of the coastal kelp bed canopy over time?

(3) Are coastal kelp beds disappearing? If yes, what are factors that could contribute to the disappearance?

(4) Are new coastal kelp beds forming?

Refer to section V.A of Attachment E of this Order for a summary of kelp bed canopy monitoring requirements.

2. Southern California Bight Monitoring Program Participation Requirements

The Discharger is required to participate in the Southern California Coastal Water Research Project (SCCWRP), Southern California Bight Regional Monitoring Program), or any other coordinator named by the Executive Officer, pursuant to CWC 13267, 13383, and 40 CFR 122.48. The intent of the Southern California Bight Regional Monitoring Program is to maximize the efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the Southern California Bight.

During these coordinated sampling efforts, the Discharger's receiving water sampling and analytical effort, as defined in section IV of the MRP, may be reallocated to provide a regional assessment of the impact of the discharge of municipal wastewater to the Southern California Bight. In that event, the receiving water sampling and analytical effort defined in section IV of the MRP will not be required for the duration of the reallocation. Anticipated modifications to the monitoring program will be coordinated so as to provide a more comprehensive picture of the ecological and statistical significance of monitoring results and to determine cumulative impacts of various pollution sources. The level of resources in terms of sampling and analytical effort redirected from the receiving water monitoring program required under section IV the MRP shall equal the level of resources provided to implement the regional monitoring and assessment program, unless the Executive Officer, the Discharger and USIBWC agree otherwise. The specific scope and

duration of the receiving water monitoring program reallocation and redirection shall be determined and set by the Executive Officer in consultation with the Discharger and USIBWC.

G. Solids Monitoring.

Since all sewage sludge/ biosolids are returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant, the Discharger is not required to monitor solids generated at the Facility pursuant to 40 CFR Part 503.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D to the Order.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the State to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

This Order may be re-opened and modified, revoked and reissued, or terminated in accordance with the provisions of 40 CFR Parts 122, 123, 124, and 125. The San Diego Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or the San Diego Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. Spill Prevention and Response Plans

The CWA largely prohibits any discharge of pollutants from point sources to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. The unpermitted discharge of wastewater to waters of the United States is illegal under the CWA. Further, the Basin Plan prohibits discharges of waste to land, except as authorized by WDRs or the terms described in Water Code section 13264. The Basin Plan also prohibits the unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system. Further, Discharge

Prohibition III.A of the Order prohibits the discharge of waste from the Facility to a location other than Discharge Point No. 001.

Sanitary collection and treatment systems experience periodic failures resulting in discharges that may affect waters of the State. There are many factors which may affect the likelihood of a spill. To ensure appropriate funding, management, and planning to reduce the likelihood of a spill, and to increase the level of response if a spill does occur, this Order requires the Discharger to maintain and implement Spill Prevention and Response Plans.

b. Spill Reporting Requirements

To determine compliance with Discharge Prohibition III.A and provide appropriate notification to the general public for the protection of public health, spill reporting requirements have been established in section VI.C.2.b of this Order.

c. Whole Effluent Toxicity (WET)

Implementing provisions at section III.C.4.c.(4) of the Ocean Plan require chronic toxicity monitoring for ocean waste discharges with minimum initial dilution factors less than 100:1 for the protection of beneficial uses of ocean waters. Based on methods of the California Ocean Plan, a performance goal of 96 TUc is established in this Order and the monthly monitoring from Order No. R9-2006-0067 has been reduced to quarterly.

This Order requires the Discharger to develop a Toxicity Reduction Evaluation (TRE) workplan, and submit the TRE workplan within 180 days of the effective date of this Order. The workplan shall describe steps the Discharger intends to follow if the performance goal for chronic toxicity is exceeded.

If the performance goal for chronic toxicity is exceeded, then within 15 days of the receipt of these test results, the Discharger shall begin conducting six additional tests, bi-weekly, over a 12 week period. If the toxicity performance goal is exceeded in any of these six additional tests, then the Discharger shall notify the San Diego Water Board. If the San Diego Water Board determines that the discharge consistently exceeds the toxicity performance goal, then the Discharger shall initiate a TRE/ Toxicity Identification Evaluation (TIE) in accordance with the TRE workplan, *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (USEPA 833-B-99-002, 1999), and USEPA TIE guidance documents (Phase I, EPA/600/6-91/005F, 1992; Phase II, EPA/600/R-92/080, 1993; and Phase III, EPA/600/R-92/081, 1993). If no toxicity is detected in any of these additional six tests, then the Discharger may return to the testing frequency specified in the MRP.

3. Best Management Practices and Pollution Prevention – Not Applicable

4. Construction, Operation, and Maintenance Specifications – Not Applicable

5. Special Provisions for Wastewater Facilities

a. South Bay Ocean Outfall Capacity

To ensure that sufficient capacity is available to accommodate potential growth in the future, this Order requires the Discharger to evaluate the capacity of the SBOO during the term of the permit and submit their findings to the San Diego Water Board.

b. POTW Capacity

Order No. R9-2006-0067 required the Discharger to submit a written report to the Executive Officer within 90 days after the monthly average influent flow rate equals or exceeds 75 percent of the secondary treatment design capacity of the Facility. In lieu of a written report for each time the monthly average influent flow rate equals or exceeds 75 percent of the secondary treatment design capacity, the requirement has been changed to require the report be submitted four years prior to the time wastewater flow are projected to reach plant capacity, as stated in Title 23, section 2232 of the California Code of Regulations (CCR). The revised requirement states:

> Four years prior to reaching POTW design capacity, the Discharger shall submit a POTW Capacity report to the San Diego Water Board showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased. A notification and copy of the report shall be sent to appropriate local elected officials, local permitting agencies, and the press. The required technical report shall be reviewed, approved, and jointly submitted by all planning and building departments having jurisdiction in the area served by the POTW. Opportunities for public participation and involvement are required during the preparation and development of the technical report. The report shall be accompanied by a statement outlining how interested persons were involved in the preparation of the technical report.
>
> If the San Diego Water Board finds that the technical report indicates adequate steps are not being taken to address the capacity problem, the San Diego Water Board will adopt a time schedule order or other enforcement order. Such action will be preceded by notice and a hearing.

c. Pretreatment Program

The federal CWA section 307(b), and federal regulations, 40 CFR Part 403, require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal, and prevent pass through of pollutants that exceed water quality objectives, standards, or permit limitations. Pretreatment requirements are imposed pursuant to 40 CFR Part 403.

The Discharger's implementation and enforcement of its approved pretreatment program is an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the San Diego Water Board, the State Water Board, or USEPA may take enforcement actions against the Discharger as authorized by the CWA and Water Code.

d. Sludge (Biosolids) Disposal Requirements

The use and disposal of biosolids is regulated under federal and State laws and regulations, including permitting requirements and technical standards included in 40 CFR Part 503. The Discharger is required to comply with the standards and time schedules contained in 40 CFR Part 503.

Title 27, CCR, Division 2, Subdivision 1, section 20005 establishes approved methods for the disposal of collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes. Requirements to ensure the Discharger disposes of solids in compliance with State and federal regulations have been included in this Order.

e. Collection System

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ (General Order) on May 2, 2006. The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating SSOs. Public agencies that are discharging wastewater into the Facility were required to obtain enrollment for regulation under the General Order by December 1, 2006.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to prescribe waste diuscharge requirements in this Order for the discharge and provided them with an opportunity to submit their written comments and recommendations as described below:

A. Notification of Interested Parties

The San Diego Water Board issued a public hearing notice announcing the release of a Tentative Order for public review and comment, the deadline for submission of final comments, and the date of the public hearing for the Board to consider the comments received, public testimony, and adoption of a final Order. Notification was published in the San Diego Union Tribune on December 11, 2012 and posted on the San Diego Water Board web site on December 11, 2012.

B. Public Hearing

The San Diego Water Board held a public hearing on the Tenetative Order during its regular board meeting on the following date and time and at the following location:

Date: February 13, 2013
Time: 9:00 AM
Location: Regional Water Quality Control Board
Regional Board Meeting Room
9174 Sky Park Court, Suite 100
San Diego, CA 92123

The Discharger and other interested Parties were invited to attend the hearing. At the hearing the San Diego Water Board heard and considered all comments pertaining to the discharge and the Tentative Order. This Order was adopted at the hearing.

C. Reconsideration of Waste Discharge Requirements

Any person affected by the action of the San Diego Water Board to adopt this Order may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050. Information for filing a petition will be provided upon request to the State Water Board. Any person affected by this Order may also request the San Diego Water Board to reconsider the Order. To be timely, such request must be made within 30 days of the date of this Order. Note that even if reconsideration by the San Diego Water Board is sought, filing a petition with the State Water Board within the time is necessary to preserve the petitioner's legal rights. If the Discharger chooses to request reconsideration of this Order or file a petition with the State Water Board, the Discharger must comply with the Order while the request for reconsideration and/or petition is being considered. The petition must be submitted within 30 days of the San Diego Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

D. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information used to develop this Order are on file and may be inspected at the address above at any time between 8:00 a.m. and 5:00 p.m., Monday through Friday. Copying of documents may be arranged through the San Diego Water Board by calling (858) 467-2952. Additional information on how to request access to inspect and obtain copies of public records maintained by the San Dieog Water Board can be accessed on the Board's website at: www.waterboards.ca.gov/rwqcb9/.

E. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the San Diego Water Board, reference this facility, and provide a name, address, and phone number.

F. Additional Information

Requests for additional information or questions regarding this Order should be directed to Joann Lim at JLLim@waterboards.ca.gov or (858) 637-5589.

ATTACHMENT G – DISCHARGE PROHIBITIONS CONTAINED IN THE OCEAN PLAN AND BASIN PLAN

I. Ocean Plan Discharge Prohibitions

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

2. Waste shall not be discharged to designated Areas of Special Biological Significance except as provided in Chapter III.E. of the Ocean Plan.

3. 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. The discharge of sludge digester supernatant directly to the ocean, or to a waste stream that discharges to the ocean without further treatment, is prohibited.

4. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table A or Table B [of the Ocean Plan] is prohibited.

II. Basin Plan Discharge Prohibitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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