CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION
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ORDER R9-2015-0013
NPDES NO. CAG919003

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER EXTRACTION DISCHARGES TO SURFACE WATERS WITHIN THE SAN DIEGO REGION

Groundwater extraction discharges from groundwater control systems to waters of the United States (also referred to herein as surface waters) in the San Diego Region are subject to waste discharge requirements (WDRs) as set forth in this National Pollutant Discharge Elimination System (NPDES) General Permit (Order), and as authorized by a Notice of Applicability (NOA) issued by the California Regional Water Quality Control Board, San Diego Region's (San Diego Water Board) Executive Officer. Definitions of terms used in this Order are contained in Attachment A. Definitions of key terms describing the purpose of this Order are also set forth below:

Table 1. Definitions for the Purpose of this Order

Groundwater Extraction Discharge	The discharge of groundwater removed from the ground or drainage collection systems to lower groundwater levels or pressures, control or eliminate groundwater seepage or leakage, stabilize slopes and other earth structures, or form part of a system to remediate groundwater contamination. Groundwater extraction discharges are associated with groundwater control systems employed in construction and foundation dewatering projects, trench and ditch dewatering projects, monitoring wells, tank removal projects, groundwater remediation projects, permanent groundwater drainage and seepage control projects, and other similar activities. The term as used in this Order does not include permanent groundwater extraction discharges to San Diego Bay or reaches of its tributaries under tidal influence with the exception of the discharge to San Diego Bay from the permanent groundwater drainage control system at One America Plaza in the City of San Diego.
Discharger	Any person that is authorized to discharge extracted groundwater under this Order through an NOA issued by the San Diego Water Board.
Waters of the United States	Generally refers to surface waters, as defined for the purposes of the federal Clean Water Act. For the purpose of this Order, the terms "surface water", and "receiving water" are interchangeably used to mean "waters of the United States," unless noted otherwise.

Table 2. Administrative Information

This Order was adopted by the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) on:	**June 24, 2015**
This Order shall become effective on:	**October 1, 2015,**
This Order shall expire on:	**September 30, 2020**
The U.S. Environmental Protection Agency (U. S. EPA) and the San Diego Water Board have classified these discharges as follows:	**Minor**

I, David W. Gibson, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, San Diego Region, on June 24, 2015.

David W. Gibson, Executive Officer

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I. SCOPE OF ORDER COVERAGE

This Order is an NPDES General Permit that regulates groundwater extraction discharges to surface waters within the San Diego Region, as set forth below. Groundwater extraction discharges associated with a specific project regulated under this Order may be single discharges at one identified location or multiple groundwater discharges at multiple locations to waters of the U.S. within the San Diego Region.

This Order requires persons discharging, or proposing to discharge, extracted groundwater to waters of the U.S. in the San Diego Region as described in section I.A of this Order, excluding those persons that meet the exception criteria identified in section I.B of this Order, to obtain NPDES regulatory coverage through enrollment in this General NPDES Order.

A. Discharges Regulated Under This Order

This Order regulates groundwater extraction discharges that include but are not limited to:

1. Groundwater extraction discharges from the following sources:

a. Construction dewatering;
b. Foundation drains[1];
c. Water from crawl space pumps;
d. Water from footing drains[1];
e. Trench and ditch dewatering;
f. Storage tank removal;
g. Monitoring well monitoring and testing;
h. Groundwater remediation[2];
i. Permanent groundwater drainage and seepage control projects to surface waters other than San Diego Bay[3]; and
j. Other similar activities.

2. Groundwater extraction discharges that have been determined by the San Diego Water Board through a reasonable potential analysis (RPA) to not adversely affect beneficial uses of the receiving waters with treatment controls and managed through best management practices pursuant to the terms and conditions of this Order;

3. Groundwater extraction discharges not otherwise excluded under section I.B. of this Order; and

4. Groundwater extraction discharges authorized by an NOA issued by the San Diego Water Board Executive Officer as described in section II.B of this Order.

B. Discharges Not Regulated Under This Order

This Order does not regulate any of the following groundwater extraction discharges.

[1] Categories are included if the system is designed to be located at or below the groundwater table to actively or passively extract groundwater during any part of the year.

[2] Groundwater remediation may also include, but is not limited to, passive groundwater infiltration to a municipal separate storm sewer system (MS4) from a known identified groundwater remediation site, as determined by the San Diego Water Board.

[3] Permanent groundwater extraction discharges from One America Plaza in the City of San Diego, CA that were previously regulated under Order No. R9-2007-0034 are not subject to this exclusion and are eligible for coverage under this Order, subject to the terms and conditions of the Order.

1. Groundwater extraction discharges that are not within the scope of this Order as described in section I and/or are not authorized by a NOA issued by the San Diego Water Board Executive Officer;
2. Permanent groundwater extraction discharges to San Diego Bay and its tributaries under tidal influence except as provided in section I. of this Order. Permanent groundwater extraction discharges refers to long-term discharges from groundwater control systems for completed structures needed to lower groundwater levels, reduce hydrostatic pressure, or control infiltration and leakage of groundwater into below ground completed structures;
3. Passive discharges of groundwater from any source other than as specified in section I.A.1;
4. Direct groundwater extraction discharges into areas designated by the State Water Resources Control Board (State Water Board) as Areas of Special Biological Significance (ASBS);
5. Groundwater extraction discharges that are comingled with other non-groundwater wastewater flows or types of waste;
6. Groundwater extraction discharges determined by the San Diego Water Board to be sufficiently regulated by another NPDES permit including but not limited to any one of the following:
   a. Order No. 2006-0008-DWQ, NPDES No. CAG990002, General National Pollutant Discharge Elimination System (NPDES) Permit For Discharges From Utility Vaults And Underground Structures To Surface Waters, and any reissuance;
   b. Order No. R9-2013-0001, NPDES No. CAS0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (MS4 Permit) and any reissuance;
   c. Order No. 2012-0011-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Waste Discharge Requirements (WDRS) for State of California, Department of Transportation, and any reissuance;
   d. Order No. 2014-0194-DWQ, NPDES No. CAG140001, Statewide General National Pollutant Discharge Elimination System (NPDES) Permit For Drinking Water System Discharges To Waters of the United States, and any reissuance; or
   e. Order No. R9-2013-0001- DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 and WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), and any reissuance. The Discharger must have an established agreement with the Small MS4 Copermitee having jurisdiction to discharge into its MS4 and the San Diego Water Board must concur that the agreement provides sufficient regulation of the groundwater extraction discharge through the Small MS4 General Permit.
7. Groundwater extraction discharges in compliance with the instructions of an On-Scene Coordinator pursuant to 40 CFR part 300 (*The National Oil and Hazardous Substances Pollution Contingency Plan*) or 33 CFR section 153.10(e) (Pollution by Oil and Hazardous Substances);
8. Groundwater extraction discharges into a sanitary sewer system leading to a federally, publically, or privately owned treatment works;
9. Groundwater extraction discharges that do not discharge to waters of the U.S. or otherwise require an NPDES permit under federal law; and

10. Groundwater extraction discharges from a post construction single family residential home, unless such a discharge has been determined to cause or contribute to a condition of pollution or nuisance. This determination may be made by the San Diego Water Board or by the appropriate local agency with the San Diego Water Board's concurrence.

II. APPLICATION REQUIREMENTS

A. Notice of Intent (NOI) Required Elements

To obtain coverage under this Order, a Discharger must submit a complete NOI application package to the San Diego Water Board office at least 60 days before proposed commencement of the discharge. The application must include all of the following items to be deemed complete:

1. **Notice of Intent (NOI) Form**. A NOI Form (see Attachment C of this Order), completed in accordance with the form instructions, including all specified attachments. The NOI must be signed and certified in accordance with Signatory and Certification Requirements contained in section V.B of Attachment D Standard Provisions of this Order.
2. **Treatment Facility Certification Report.** If the groundwater extraction discharge will need treatment to comply with the effluent limitations, then the NOI must include a report describing and certifying the adequacy of each component of the treatment facilities prepared by a California licensed professional engineer, competent and proficient in the field pertinent to the report and qualified to prepare such report. The report shall also certify the following:
   - **a.** All treatment facility startup and operation instruction manuals are adequate and available to operating personnel;
   - **b.** Adequate treatment facility maintenance and testing (if treatment facilities are on "standby") schedules are included in the treatment facility operations manual;
   - **c.** Treatment facilities and appurtenances will be fully operational, as designed prior to the commencement of discharge ; and
   - **d.** Influent and effluent sampling locations or ports are located in areas where samples representative of the waste stream to be monitored can be obtained.

   The design engineer shall affix his/her signature and engineering license number to this certification report.
3. **Disposal Alternative Analysis**. An evaluation of a range of alternative disposal methods to the proposed extracted groundwater discharge to surface waters including reasons and conclusions as to why it is technically or economically infeasible to implement these alternatives. Alternative disposal methods[1] include but are not limited to the following:
   - **a.** Collection and recycling of the extracted groundwater for a direct beneficial use, including landscape or agricultural irrigation, dust control, soil compaction during earthwork activities, or other appropriate uses in lieu of potable drinking water supplies;
   - **b.** Reinjection of the extracted groundwater;
   - **c.** Discharge of the extracted groundwater to an MS4 that employs low impact development practices or flows into storm water capture basins to evaporate or recharge groundwater; and

[1] The Discharger shall consult with the San Diego Water Board if any alternative disposal methods are subject to regulation under separate waste discharge requirements.

d. Discharge of the extracted groundwater to a sanitary sewer system leading to a federally, publically, or privately owned treatment works.

4. **MS4 Operator Notification**. Dischargers proposing to discharge extracted groundwater to an MS4 shall include with their NOI, documentation demonstrating that they have notified the MS4 operator of the point of proposed discharge into the MS4. Consistent with California Water Code (CWC) section 13002 and 40 CFR section 122.5(c), this Order is not intended to affect any separate legal authority an MS4 owner may have to prohibit a discharge or to require the Discharger to obtain any permits or approvals from the MS4 owner before initiating discharges into the MS4.
5. **Reasonable Potential Analysis (RPA)**. The results of a reasonable potential analysis described in Appendix C-1 of this Order to provide direction to the Discharger and the San Diego Water Board for determining if a pollutant in the proposed groundwater extraction discharge causes, has the reasonable potential to cause, or contributes to an excursion above any applicable State water quality objective or federal water quality criteria in accordance with 40 CFR section 122.44(d)(1)(iii).
6. **Monitoring and Reporting Program (MRP)**. A proposed MRP, as specified in section III.A of the MRP in attachment E of this Order.
7. **Project Map**. A scaled project map(s) that identifies the following:
   a. The essential features of the groundwater control and extraction system including the extent of any drawdown;
   b. All known groundwater contamination sites and plumes within 0.5 miles of each groundwater extraction point to be used in the groundwater control system;
   c. The receiving waters for each proposed groundwater extraction discharge; and
   d. If discharge of extracted groundwater into a MS4 is proposed, the MS4 that will receive the groundwater extraction discharge.
8. **Supplemental Information**. Upon request, the Discharger must submit any additional supplemental information that the San Diego Water Board deems necessary to determine whether the discharge meets the criteria for coverage under this Order, or to prescribe an appropriate MRP, or both.
9. **Application Fee**. Payment of the application fee, equal to the first annual fee, made payable to "SWRCB." In accordance with California Code of Regulations (CCR) title 23, division 3, chapter 9, Waste Discharge Reports and Requirements, article 1, Fees. The fee regulations can be accessed at http://www.waterboards.ca.gov/resources/fees/#npdes.

The NOI Application must be submitted to the following address:

San Diego Water Board
2375 Northside Drive, Suite 100
San Diego, CA 92108

Attn: Groundwater Extraction Permit
Source Control Regulation Unit
NOTICE OF INTENT

The San Diego Water Board is implementing a Paperless Office system to reduce paper use. Please convert all submissions with attachments to a searchable Portable Document Format (PDF) and submit the documents on a compact disk.

B. Notice of Applicability (NOA)

The NOI and each element thereof is subject to San Diego Water Board approval. After the Discharger's application package is deemed complete and eligible for coverage under this Order by the San Diego Water Board, the Board will issue a NOA to the Discharger. The NOA may include additional site-specific monitoring requirements and requirements due to specific circumstances of the groundwater extraction discharge. Regulatory coverage for the groundwater extraction discharge described in the application package commences with the date of issuance of the NOA and the Discharger is authorized to discharge extracted groundwater commencing with the NOA issuance date.

C. Notice of Exclusion (NOEX)

The San Diego Water Board may issue a Notice of Exclusion (NOEX), which denies coverage under this Order because the proposed groundwater extraction discharge is not covered within the scope of this Order, terminates permit coverage of an existing discharge for cause, or requires the Discharger to submit an application for an individual WDR. A NOEX is a notice that indicates that the discharge is not eligible for coverage under this Order and states the reason why.

D. Dischargers Covered Under Prior NPDES Order Nos. R9-2007-0034 or R9-2008-0002

Existing Dischargers subject to San Diego Water Board Order Nos. R9-2007-0034 or R9-2008-0002 (referred to in this Order as existing Dischargers) will continue coverage under those Orders for one year following the date of adoption for this Order. After June 24, 2016, all Notices of Enrollment issued under Order Nos. R9-2007-0034 or R9-2008-0002 will be terminated. Existing Dischargers shall submit a complete NOI package as described in section II.A of this Order (excluding the fee) no later than March 24, 2016 or else risk losing permit coverage.

E. Notice of Applicability (NOA) Modification

The Discharger may submit a written request, for modification of a NOA, to the San Diego Water Board. The request for NOA modification shall include "Request for NOA Amendment" in the subject line; the Waste Discharge Identification Number (WDID) assigned to the Discharger in the original NOA; the name and address of the Discharger; all of the information the Discharger believes is necessary for the San Diego Water Board to evaluate the request for modification; and shall be signed and certified by the Discharger in accordance with the signatory requirements in section V.B of Attachment D, Standard Provisions for this Order, Signatory and Certification Requirements. A request for modification of an NOA does not require resubmittal of the entire NOI package, but the San Diego Water Board may ask for supplemental information as necessary to determine if the requested modification is appropriate.The submittal of a request by the Discharger for modification of the NOA does not stay any condition of this Order and the Discharger shall continue to comply with this Order and the NOA until further notice from the San Diego Water Board.

F. Notice of Termination (NOT)

To terminate coverage under this Order, the Discharger must submit a complete and accurate Notice of Termination (NOT), to the San Diego Water Board. The NOT provides notice that the Discharger has ceased the discharge of extracted groundwater associated with the groundwater control activities at the site under this Order.

The NOT should include "Notice of Termination" in the subject line, the Waste Discharge Identification Number (WDID) assigned to the project by the San Diego Water Board in the NOA, and the name and address of the Discharger. The NOT must be signed and dated by the Discharger in accordance with the signatory requirements in section V.B of Attachment D, Standard Provisions for this Order, Signatory and Certification Requirements of this Order. The Discharger's coverage under this Order will terminate on the date specified in a coverage termination notice issued by the San Diego Water Board and the Discharger will no longer be authorized to discharge extracted groundwater under this Order. The San Diego Water Board's coverage termination notice in no way prevents the Board from taking enforcement action for any violations of the Order by the Discharger.

Prior to receiving the coverage termination notice the Discharger shall continue to comply with the requirements of this Order including payment of any applicable fees and outstanding invoices, and submittal of any required reports.

G. Transfer of Ownership

The NOA authorizing coverage for the discharge of extracted groundwater for a specific groundwater control project is not transferable. In the event of any planned change in ownership of land or waste discharge facilities presently owned by the Discharger, the Discharger must notify the new succeeding owner, by letter 120 days prior to property transfer, of the obligation to apply for coverage under this Order for the extracted groundwater discharge. A copy of this notification shall be promptly submitted to the San Diego Water Board. Additionally, the Discharger must submit a NOT to the San Diego Water Board. The new succeeding owner must submit a new NOI application package for coverage under this Order prior to discharging extracted groundwater.

III. FINDINGS

The San Diego Water Board finds:

A. Background. This Order supersedes NPDES Order Nos. R9-2007-0034 and R9-2008-0002. Dischargers enrolled under Order Nos. R9-2007-0034 and R9-2008-0002 must obtain coverage under this new Order within 365 days after the effective date of this Order to continue their discharge under WDRs in this Order. Dischargers may continue to discharge under the terms of the previous Orders for up to 365 days after the effective date of this Order or until they receive a new NOA from the San Diego Water Board.

B. Legal Authorities. This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260).This Order is also issued pursuant to section 402 of the CWA and implementing regulations adopted by the U.S. Environmental Protection Agency (U.S. EPA) and chapter 5.5, division 7 of the CWC (commencing with section 13370). This Order also serves as a general NPDES permit for point source discharges from approved facilities to surface waters and storm water conveyances discharging to surface waters. The San Diego Water Board is authorized to issue general NPDES permits pursuant to U.S. EPA approval issued in 1989.

C. Background and Rationale for Requirements. The San Diego Water Board developed the requirements in this Order based on information submitted as part of the NOI applications for individual groundwater extraction facilities, through MRPs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements of this Order, is hereby incorporated into this Order and constitutes part of the Findings of this Order. Attachments A through F and Attachment G are also incorporated into this Order.

D. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections VI.B 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.

E. Notification of Interested Parties. The San Diego Water Board notified the Dischargers covered under Orders No. R9-2007-0034 and R9-2008-0002 and interested agencies and persons of its intent to prescribe waste discharge requirements for these discharges and provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

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

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order Nos. R9-2007-0034 and R9-2008-0002, except for enforcement purposes and for coverage of existing discharges until they timely enroll in this Order, and in order to meet the provisions contained in division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of the previous Orders.

IV. DISCHARGE PROHIBITIONS

A. The discharge of extracted groundwater at a location, for a purpose or duration, or in a manner, different from that described in section I of this Order, the NOI, or the NOA is prohibited.

B. The discharge of extracted groundwater to areas designated by the State Water Board as Areas of Special Biological Significance (ASBS) is prohibited except as provided in an exception issued by State Water Board pursuant to provisions of the Ocean Plan. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas. Heisler Park Ecological Reserve, located in coastal waters near the City of Laguna Beach, the San Diego-La Jolla Ecological Reserve, and the San Diego Marine Life Refuge, located in coastal waters near La Jolla, a community of the City of San Diego, are ASBS designated by the State Water Board.

C. The discharge of extracted groundwater in excess of the flowrate specified in an NOA is prohibited, unless the Discharger obtains a revised discharge NOA authorizing an increased flowrate that is issued pursuant to section II.E above.

D. The addition of pollutants to extracted groundwater to be discharged to surface waters within the San Diego Region is prohibited. The only exception to this prohibition is that chemicals may be added to extracted groundwater to control biofouling in treatment systems and enhance treatment, provided that the extracted groundwater discharged meets the effluent limitations for such chemicals and toxicity established by this Order and any additional requirements specified in the discharge NOA issued by the San Diego Water Board. In the NOI, the Discharger must notify the San Diego Water Board of the types and amounts of any such chemicals proposed to be added to the extracted groundwater.

E. The discharge of extracted groundwater to surface waters within the San Diego Region is prohibited unless a complete NOI has been submitted, as determined by the San Diego Water

Board, and the San Diego Water Board has issued an NOA for the discharge; or the discharge is regulated by a separate NPDES permit.

F. Permanent groundwater extraction discharges to San Diego Bay from a groundwater control system are prohibited[1]. Permanent groundwater extraction discharges refers to long term discharges from groundwater control systems for a completed structure, needed to lower groundwater levels, reduce hydrostatic pressure or control infiltration and leakage of groundwater into below ground completed structures.

G. The discharge of extracted groundwater must comply with Discharge Prohibitions contained in the Water Quality *Control Plan for Ocean Waters of California, California Ocean Plan (Ocean Plan)* and *chapter 4 of the Water Quality Control Plan for the San Diego Basin* (Basin Plan). These prohibitions are incorporated into this Order as if fully set forth herein and are summarized in Attachment G of this Order.

H. Pursuant to the TMDL wasteload allocations (WLAs), summarized in Attachment B of this Order, discharges including copper to the Shelter Island Yacht Basin (SIYB) watershed are prohibited. A monitoring result of non-detect using approved analytical laboratory methods and minimum levels for copper is required to comply with this Discharge Prohibition.

I. Pursuant to the TMDL WLAs, summarized in Attachment B of this Order, discharges including diazinon to Chollas Creek, are prohibited. A monitoring result of non-detect using approved methods and minimum levels is deemed to be in compliance with this discharge prohibition.

J. Pursuant to the TMDL WLAs, summarized in Attachment B of this Order, the discharge of total coliform, fecal coliform, and enterococci bacteria to the water quality segments identified in sections V and VI of Attachment B are prohibited. A monitoring result of non-detect using approved methods and minimum levels is deemed to comply with this Discharge Prohibition.

K. Pursuant to the TMDL WLAs, summarized in Attachment B of this Order, the discharge of total nitrogen and total phosphorus to Rainbow Creek is prohibited. A monitoring result of non-detect using approved methods and minimum levels for total nitrogen and total phosphorus is deemed to comply with this Discharge Prohibition.

L. Pursuant to the TMDL WLAs, summarized in Attachment B of this Order, the discharge of dissolved copper, lead, and zinc to Chollas Creek, above the effluent limitations specified in Table 4, is prohibited. A monitoring result of non-detect using approved methods and minimum levels for dissolved copper, lead, and zinc is deemed to comply with this Discharge Prohibition.

M. Pursuant to the TMDL WLAs, summarized in Attachment B of this Order, the discharge of sediment to Los Penasquitos Lagoon is prohibited. A monitoring result of non-detect using approved methods and minimum levels for settleable solids and total suspended solids is deemed to comply with this Discharge Prohibition.

V. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The Discharger shall maintain compliance with the effluent limitations applicable to the receiving waters as specified below at the Discharge Point described in the NOA, with compliance measured as described in the MRP in Attachment E of this Order and the NOA.

A. Effluent Limitations – Freshwater Inland Surface Waters including Lakes, Reservoirs, and Buena Vista Lagoon

[1] Permanent groundwater extraction discharges to San Diego Bay from the groundwater control system employed for the structure at One America Plaza in the City of San Diego are excluded from this prohibition.

Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 parts per thousand and above and at locations where this occurs 95% of the time. Where receiving water salinities are between 1 and 10 parts per thousand, the more stringent of freshwater or saltwater criteria applies.

1. **Metals Effluent Limitations**

   a. Discharges to inland freshwater surface waters shall not exceed the effluent limitations specified in Table 3 below:

Table 3. Hardness-Dependent Metal Limitations for Freshwater Inland Surface Waters[3]

Parameter[1]	Units[2]	Hardness (mg/L)					
		Up to 200		200 - 300		300 and above	
		AMEL	MDEL	AMEL	MDEL	AMEL	MDEL
Cadmium	µg/L	3.5	7.0	4.8	9.6	6.0	12
Copper[3]	µg/L	14	28	20	39	25	50
Lead[3]	µg/L	6.3	13	11	21	15	31
Nickel	µg/L	77	150	110	220	140	280
Silver	µg/L	6.7	13	13	27	22	44
Zinc[3]	µg/L	110	210	150	300	190	390

[1] All metal effluent limitations are expressed as total recoverable metal.

[2] The concentraton-based effluent limitations stated in the table above are also applicable as mass-based effluent limitations expressed as lbs/day which are calculated as follows: Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. Parameter Concentration (ifexpressed as µg/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. The Flow Limit (MGD) value used in this equaton shall be the Discharger's maximum allowable flow rate limit specified in the NOA. The discharge shall not cause the calculated mass-based effluent limitations to be exceeded.

[3] Discharges to Chollas Creek shall not exceed the effluent limitations established in section V.A.1.b of this Order.

   b. Discharges to Chollas Creek shall not exceed the following effluent limitations for copper, lead, and zinc specified in Table 4 below:

Table 4. Hardness-Dependent Metal Limitations for Chollas Creek[2]

Parameter[1]	Units	Hardness (mg/L)					
		Up to 200		200 - 300		300 and above	
		AMEL	MDEL	AMEL	MDEL	AMEL	MDEL
Copper	µg/L	11.6	23.2	16.8	33.8	21.5	43.2
Lead	µg/L	3.9	7.8	5.6	12.0	8.1	16.1
Zinc	µg/L	94.4	189.4	133.1	267.0	169.9	340.8

[1] All metal effluent limitations are expressed as total recoverable metal.

[2] See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.

2. **Municipal Freshwater Inland Surface Waters.** Discharges to freshwater inland surface waters, with a designated domestic and municipal supply (MUN) beneficial use, shall not exceed the effluent limitations specified in Table 5 below:

Table 5. Effluent Limitations for Discharges to Freshwater Inland Surface Waters with MUN Beneficial Use

Parameters	Units[6]	Effluent Limitations

		AMEL	MDEL	Instantaneous Maximum
Applicable to All Dischargers				
Settleable Solids	ml/L	0.1	--	0.2
Total Suspended Solids	mg/L	30	--	50
Turbidity	NTU	--	--	20[1]
Chronic Toxicity	Pass/Fail	--	Pass[2]	--
pH	standard units	--	--	6.5 – 8.5[3]
Based on Results of Reasonable Potential Analysis				
Hydrogen Sulfide	µg/L	2.0	4.0	10
Xylene	µg/L	--	--	5
Chlorinated Phenolics	µg/L	--	--	1
Remaining Base/Neutral Compounds[4]	µg/L	--	--	10
Total Petroleum Hydrocarbons	mg/L	--	--	0.5
Percent Sodium	%	--	--	60
Total Nitrogen[7]	mg/L	1.0	--	2.0
Total Phosphorus[7]	mg/L	0.1	--	0.2
Methylene Blue Active Substances (MBAS)	mg/L	--	--	0.5
Fluoride	mg/L	--	--	1.0
Total Residual Chlorine	µg/L	2.0	8.0	10
Dissolved Oxygen	mg/L	--	--	5.0/6.0[5]
Iron, Total Recoverable	mg/L	--	--	0.3
Manganese, Total Recoverable	mg/L	--	--	0.05
Total Coliform[8]	MPN/100 mL	--	--	1,000
Fecal Coliform[8]	MPN/100 mL	--	--	200
Enterococci[8]	MPN/100 mL	--	--	[8]
Dibromochloropropane	µg/L	--	--	0.2
Ethylene Dibromide	µg/L	--	--	0.02
Methyl-Tert-Butyl Ether (MTBE)	µg/L	--	--	5
Antimony, Total Recoverable	µg/L	14	28	--
Arsenic, Total Recoverable	µg/L	120	250	--
Chromium (III) , Total Recoverable	µg/L	530	1,100	--
Chromium (VI) , Total Recoverable	µg/L	8.0	16	--
Mercury, Total Recoverable	µg/L	0.05	0.1	--
Selenium, Total Recoverable	µg/L	4.1	8.2	--
Thallium, Total Recoverable	µg/L	1.7	3.4	--
Cyanide, Total	µg/L	4.3	8.5	--
2,3,7,8 TCDD	µg/L	1.3E-08	2.6E-08	--
TCDD Equivalents	µg/L	1.3E-08	2.6E-08	--
Acrolein	µg/L	320	640	--
Acrylonitrile	µg/L	0.06	0.12	--
Benzene	µg/L	1.2	2.4	--

Parameters	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Bromoform	µg/L	4.3	8.6	--
Carbon Tetrachloride	µg/L	0.25	0.50	--
Chlorobenzene	µg/L	680	1,400	--
Chlorodibromomethane	µg/L	0.40	0.80	--
Dichlorobromomethane	µg/L	0.56	1.1	--
1,2-Dichloroethane	µg/L	0.38	0.76	--
1,1-Dichloroethylene	µg/L	0.1	0.1	--
1,2-Dichloropropane	µg/L	0.52	1.0	--
1,3-Dichloropropylene	µg/L	10	20	--
Ethylbenzene	µg/L	3,100	6,200	--
Methyl Bromide	µg/L	48	96	--
Methylene Chloride	µg/L	4.7	9.4	--
1,1,2,2-Tetrachloroethane	µg/L	0.17	0.34	--
Tetrachloroethylene	µg/L	0.8	1.6	--
Toluene	µg/L	6,800	14,000	--
1,2-Trans-Dichloroethylene	µg/L	700	1,400	--
1,1,2-Trichloroethane	µg/L	0.60	1.2	--
Trichloroethylene	µg/L	2.7	5.4	--
Vinyl Chloride	µg/L	2.0	4.0	--
2-Chlorophenol	µg/L	120	240	--
2,4-Dichlorophenol	µg/L	93	190	--
2,4-Dimethylphenol	µg/L	540	1,100	--
4,6-dinitro-o-resol	µg/L	13	27	--
2,4-Dinitrophenol	µg/L	70	140	--
Pentachlorophenol	µg/L	0.28	0.56	--
Phenol	µg/L	21,000	42,000	--
2,4,6-Trichlorophenol	µg/L	2.1	4.2	--
Acenaphthene	µg/L	1,200	2,400	--
Anthracene	µg/L	9,600	19,000	--
Benzidine	µg/L	0.00012	0.00024	--
Benzo(a)Anthracene	µg/L	0.0044	0.0088	--
Benzo(a)Pyrene	µg/L	0.0044	0.0088	--
Benzo(b)Fluoranthene	µg/L	0.0044	0.0088	--
Benzo(k)Fluoranthene	µg/L	0.0044	0.0088	--
Bis(2-Chloroethyl)Ether	µg/L	0.031	0.062	--
Bis(2-Chloroisopropyl)Ether	µg/L	1,400	2,800	--
Bis(2-Ethylhexyl)Phthalate	µg/L	1.8	3.6	--
Butylbenzyl Phthalate	µg/L	3,000	6,000	--
2-Chloronaphthalene	µg/L	1,700	3,400	--
Chrysene	µg/L	0.0044	0.0088	--
Dibenzo(a,h)Anthracene	µg/L	0.0044	0.0088	--
1,2-Dichlorobenzene	µg/L	2,700	5,400	--
1,3-Dichlorobenzene	µg/L	400	800	--
1,4-Dichlorobenzene	µg/L	400	800	--
3,3 Dichlorobenzidine	µg/L	0.04	0.080	--

Parameters	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Diethyl Phthalate	µg/L	23,000	46,000	--
Dimethyl Phthalate	µg/L	310,000	630,000	--
Di-n-Butyl Phthalate	µg/L	2,700	5,400	--
2,4-Dinitrotoluene	µg/L	0.11	0.22	--
1,2-Diphenylhydrazine	µg/L	0.04	0.080	--
Fluoranthene	µg/L	300	600	--
Fluorene	µg/L	1,300	2,600	--
Hexachlorobenzene	µg/L	0.00075	0.0015	--
Hexachlorobutadiene	µg/L	0.44	0.88	--
Hexachlorocyclopentadiene	µg/L	240	480	--
Hexachloroethane	µg/L	1.9	3.8	--
Indeno(1,2,3-cd)Pyrene	µg/L	0.0044	0.0088	--
Isophorone	µg/L	8.4	17	--
Nitrobenzene	µg/L	17.0	34	--
N-Nitrosodimethylamine	µg/L	0.0007	0.0014	--
N-Nitrosodi-n-Propylamine	µg/L	0.005	0.010	--
N-Nitrosodiphenylamine	µg/L	5.0	10	--
Pyrene	µg/L	960	1,900	--
Aldrin	µg/L	0.00013	0.00026	--
alpha-BHC	µg/L	0.0039	0.0078	--
beta-BHC	µg/L	0.014	0.028	--
gamma-BHC	µg/L	0.019	0.038	--
Chlordane	µg/L	0.00057	0.0011	--
4,4'-DDT	µg/L	0.00059	0.0012	--
4,4'-DDE	µg/L	0.00059	0.0012	--
4,4'-DDD	µg/L	0.00083	0.0017	--
Dieldrin	µg/L	0.00014	0.00028	--
alpha-Endosulfan	µg/L	0.046	0.092	--
beta-Endosulfan	µg/L	0.046	0.092	--
Endosulfan Sulfate	µg/L	110	220	--
Endrin	µg/L	0.029	0.059	--
Endrin Aldehyde	µg/L	0.76	1.5	--
Heptachlor	µg/L	0.00021	0.00042	--
Heptachlor Epoxide	µg/L	0.00010	0.00020	--
PCBs sum	µg/L	0.00017	0.00034	--
Toxaphene	µg/L	0.00016	0.00033	--

[1] In addition to an instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time.

[2] As specified in section IV of the MRP, Attachment E of this permit.

[3] pH shall remain within the limits of 6.5 and 8.5 s.u. at all times.

[4] As defined using Method 6410.

[5] Dissolved oxygen shall not be less than 5.0 mg/L at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 mg/L in waters with designated cold fresh-water habitat beneficial use.

[6] The concentraton-based effluent limitations stated in the table above are also applicable as mass-based effluent limitations expressed as lbs/day which are calculated as follows: Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) =

Mass-based Effluent Limitation expressed as lbs/day. Parameter Concentration (if expressed as µg/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. The Flow Limit (MGD) value used in this equaton shall be the Discharger's maximum allowable flow rate limit specified in the NOA. The discharge shall not cause the calculated mass-based effluent limitations to be exceeded.

[7] For discharges to Rainbow Creek and its sub-watershed, the AMEL and Instantaneous Maximum are non-detect for total nitrogen and total phosphorus using approved analytical laboratory methods and minimum levels in compliance with Discharge Prohibition K.

[8] For discharges to Forrester Creek, as specified in section VI of Attachment B, the effluent limitations are non-detect for total coliform, fecal coliform and enterococcus using approved analytical laboratory methods and minimum levels in compliance with Discharge Prohibition J.

3. **Non-Municipal Freshwater Inland Surface Waters, including Buena Vista Lagoon.** Discharges to freshwater inland surface waters, without a designated domestic and municipal supply (MUN) beneficial use, shall not exceed the effluent limitations specified in Table 6. below:

Table 6. Effluent Limitations for Discharges to Freshwater Inland Surface Waters without MUN Beneficial Use

Parameter	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Applicable to All Dischargers				
Settleable Solids	ml/L	0.1	--	0.2
Total Suspended Solids	mg/L	30	--	50
Turbidity	NTU	--	--	20[1]
Chronic Toxicity	Pass/Fail	--	Pass[2]	--
pH	standard units	--	--	6.5 – 8.5[3]
Based on Results of Reasonable Potential Analysis				
Hydrogen Sulfide	µg/L	2.0	4.0	10
Xylene	µg/L	--	--	5.0
Chlorinated Phenolics	µg/L	--	--	10
Remaining Base/Neutral Compounds[4]	µg/L	--	--	10
Total Petroleum Hydrocarbons	mg/L	--	--	0.5
Percent Sodium	%	--	--	60
Total Nitrogen	mg/L	1.0	--	2.0
Total Phosphorus	mg/L	0.1	--	0.2
Methylene Blue Active Substances (MBAS)	mg/L	--	--	0.5
Fluoride	mg/L	--	--	1.0
Total Residual Chlorine	µg/L	2.0	8.0	10
Dissolved Oxygen	mg/L	--	--	5.0/6.0[5]
Iron, Total Recoverable[9]	mg/L	--	--	0.3
Manganese, Total Recoverable[9]	mg/L	--	--	0.05
Total Coliform[8]	MPN/100 mL	--	--	1,000
Fecal Coliform[8]	MPN/100 mL	--	--	200
Enterococci[8]	MPN/100 mL	--	--	[8]
Dibromochloropropane	µg/L	--	--	0.2
Ethylene Dibromide	µg/L	--	--	0.02
Antimony, Total Recoverable	µg/L	4,300	8,600	--

Parameter	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Arsenic, Total Recoverable	µg/L	120	250	--
Chromium (III) , Total Recoverable	µg/L	340	670	--
Chromium (VI) , Total Recoverable	µg/L	8.0	16	--
Mercury, Total Recoverable	µg/L	0.051	0.10	--
Selenium, Total Recoverable	µg/L	4.1	8.2	--
Thallium, Total Recoverable	µg/L	6.3	13	--
Cyanide, Total	µg/L	4.3	8.5	--
2,3,7,8 TCDD	µg/L	1.40E-08	2.81E-08	--
TCDD Equivalents	µg/L	1.40E-08	2.81E-08	--
Acrolein	µg/L	780	1,600	--
Acrylonitrile	µg/L	0.66	1.3	--
Benzene	µg/L	71	140	--
Bromoform	µg/L	360	720	--
Carbon Tetrachloride	µg/L	4.4	8.8	--
Chlorobenzene	µg/L	21,000	42,000	--
Chlorodibromomethane	µg/L	34	68	--
Dichlorobromomethane	µg/L	46	92	--
1,2-Dichloroethane	µg/L	99	200	--
1,1-Dichloroethylene	µg/L	3.2	6.4	--
1,2-Dichloropropane	µg/L	39	78	--
1,3-Dichloropropylene	µg/L	1,700	3,400	--
Ethylbenzene	µg/L	29,000	58,000	--
Methyl Bromide	µg/L	4,000	8,000	--
Methylene Chloride	µg/L	1,600	3,200	--
1,1,2,2-Tetrachloroethane	µg/L	11	22	--
Tetrachloroethylene	µg/L	8.9	18	--
Toluene	µg/L	200,000	400,000	--
1,2-Trans-Dichloroethylene	µg/L	140,000	280,000	--
1,1,2-Trichloroethane	µg/L	42	84	--
Trichloroethylene	µg/L	81	160	--
Vinyl Chloride	µg/L	530	1,100	--
2-Chlorophenol	µg/L	400	800	--
2,4-Dichlorophenol	µg/L	790	1,600	--
2,4-Dimethylphenol	µg/L	2,300	4,600	--
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	µg/L	765	1,500	--
2,4-Dinitrophenol	µg/L	14,000	28,000	--
Pentachlorophenol	µg/L	4.3	8.7	--
Phenol	µg/L	4,600,000	9,200,000	--
2,4,6-Trichlorophenol	µg/L	6.5	13	--
Acenaphthene	µg/L	2,700	5,400	--
Anthracene	µg/L	110,000	220,000	--
Benzidine	µg/L	0.00054	0.0011	--
Benzo(a)Anthracene	µg/L	0.049	0.098	--

Parameter	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Benzo(a)Pyrene	µg/L	0.049	0.098	--
Benzo(b)Fluoranthene	µg/L	0.049	0.098	--
Benzo(k)Fluoranthene	µg/L	0.049	0.098	--
Bis(2-Chloroethyl)Ether	µg/L	1.4	2.8	--
Bis(2-Chloroisopropyl)Ether	µg/L	170,000	340,000	--
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	12	--
Butylbenzyl Phthalate	µg/L	5,200	10,000	--
2-Chloronaphthalene	µg/L	4,300	8,600	--
Chrysene	µg/L	0.049	0.098	--
Dibenzo(a,h)Anthracene	µg/L	0.049	0.098	--
1,2-Dichlorobenzene	µg/L	17,000	34,000	--
1,3-Dichlorobenzene	µg/L	2,600	5,200	--
1,4-Dichlorobenzene	µg/L	2,600	5,200	--
3,3 Dichlorobenzidine	µg/L	0.077	0.15	--
Diethyl Phthalate	µg/L	120,000	240,000	--
Dimethyl Phthalate	µg/L	2,900,000	5,800,000	--
Di-n-Butyl Phthalate	µg/L	12,000	24,000	--
2,4-Dinitrotoluene	µg/L	9.1	18	--
1,2-Diphenylhydrazine	µg/L	0.54	1.1	--
Fluoranthene	µg/L	370	740	--
Fluorene	µg/L	14,000	28,000	--
Hexachlorobenzene	µg/L	0.00077	0.0015	--
Hexachlorobutadiene	µg/L	50	100	--
Hexachlorocyclopentadiene	µg/L	17,000	34,000	--
Hexachloroethane	µg/L	8.9	18	--
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	0.098	--
Isophorone	µg/L	600	1,200	--
Nitrobenzene	µg/L	1,900	3,800	--
N-Nitrosodimethylamine	µg/L	8.1	16	--
N-Nitrosodi-n-Propylamine	µg/L	1.4	2.8	--
Pyrene	µg/L	11,000	22,000	--
Aldrin	µg/L	0.00014	0.00028	--
alpha-BHC	µg/L	0.013	0.026	--
beta-BHC	µg/L	0.046	0.092	--
gamma-BHC	µg/L	0.063	0.13	--
Chlordane	µg/L	0.00059	0.0012	--
4,4'-DDT	µg/L	0.00059	0.0012	--
4,4'-DDE (linked to DDT)	µg/L	0.00059	0.0012	--
4,4'-DDD	µg/L	0.00084	0.0017	--
Dieldrin	µg/L	0.00014	0.00028	--
alpha-Endosulfan	µg/L	0.046	0.091	--
beta-Endosulfan	µg/L	0.046	0.091	--
Endosulfan Sulfate	µg/L	240	481	--
Endrin	µg/L	0.029	0.059	--
Endrin Aldehyde	µg/L	0.81	1.6	--

Parameter	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Heptachlor	µg/L	0.0002	0.0004	--
Heptachlor Epoxide	µg/L	0.00011	0.00022	--
PCBs sum	µg/L	0.00017	0.00034	--
Toxaphene	µg/L	0.00016	0.00033	--
Diazinon[7]	µg/L	ND	ND	

[1] In addition to an instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time.

[2] As specified in section IV of the MRP, Attachment E of this permit.

[3] pH shall remain within the limits of 6.5 and 8.5 s.u. at all times.

[4] As defined using Method 6410.

[5] Dissolved oxygen shall not be less than 5.0mg/L at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 mg/L in waters with cold fresh-water habitat beneficial use. pH shall remain within the limits of 6.5 and 8.5 s.u. at all times.

[6] The concentraton-based effluent limitations stated in the table above are also applicable as mass-based effluent limitations expressed as lbs/day which are calculated as follows: Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. Parameter Concentration (if expressed as µg/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. The Flow Limit (MGD) value used in this equaton shall be the Discharger's maximum allowable flow rate limit specified in the NOA. The discharge shall not cause the calculated mass-based effluent limitations to be exceeded.

[7] For discharges to Chollas Creek and its sub-watershed, the AMEL and MDEL are non-detect for diazinon using approved analytical laboratory methods and minimum levels for diazinon in compliance with Discharge Prohibition I.

[8] For discharges to Aliso Creek and its tributaries including the mouth, San Juan Creek including the mouth, Tecolote Creek, San Diego River, and Chollas Creek (specific reaches of these creeks are specified in section VI of Attachment B), the effluent limitations are non-detect for total coliform, fecal coliform and enterococcus using approved analytical laboratory methods and minimum levels in compliance with Discharge Prohibition J.

[9] For the Mission San Diego (7.11) and Sycamore Canyon (7.12) Hydrographic Subareas, the effluent limitation for iron shall be 1.0 mg/L and the effluent limitation for manganese shall be 1.0 mg/L. Sycamore Canyon Subarea, a portion of the Santee Hydrologic Subarea, includes the watersheds of the following north-south trending canyons: Oak Creek, Spring Canyon, Little Sycamore Canyon, Quail Canyon, and Sycamore Canyon. The Sycamore Canyon Subarea extends eastward from the Mission San Diego hydrologic sub area (HSA) to the confluence of the San Diego River and Forester Creek, immediately south of the Santee Lakes.

B. Effluent Limitations – Saltwater Inland Surface Waters, Not Including Bays and Estuaries

Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 parts per thousand and above and at locations where this occurs 95% of the time. Where receiving water salinities are between 1 and 10 parts per thousand the more stringent of freshwater or saltwater criteria applies.

1. Discharges to saltwater inland surface waters, but not including bays and estuaries, shall not exceed the effluent limitations specified in Table 7 below.

Table 7. Effluent Limitations for Discharges to Saltwater Inland Surface Waters, Not Including Bays and Estuaries

Parameters	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Applicable to All Dischargers				
Settleable Solids	ml/L	0.1	--	0.2
Total Suspended Solids	mg/L	30	--	50
Turbidity	NTU	--	--	20[1]
Chronic Toxicity	Pass/Fail	--	Pass[2]	--
pH	standard units	--	--	6.5 – 8.5[3]
Based on Results of Reasonable Potential Analysis				
Hydrogen Sulfide	µg/L	2.0	4.0	10
Xylene	µg/L	--	--	5.0
Chlorinated Phenolics	µg/L	--	--	10
Remaining Base/Neutral Compounds[4]	µg/L	--	--	10
Total Petroleum Hydrocarbons	mg/L	--	--	0.5
Percent Sodium	%	--	--	60
Total Nitrogen	mg/L	1.0	--	2.0
Total Phosphorus	mg/L	0.1	--	0.2
Methylene Blue Active Substances (MBAS)	mg/L	--	--	0.5
Fluoride	mg/L	--	--	1.0
Total Residual Chlorine	µg/L	2.0	8.0	10
Dissolved Oxygen	mg/L	--	--	5.0/6.0[5]
Iron, Total Recoverable	mg/L			0.3
Manganese, Total Recoverable	mg/L			0.05
Total Coliform	MPN/100 mL	--	--	1,000
Fecal Coliform	MPN/100 mL	--	--	200
Dibromochloropropane	µg/L	--	--	0.2
Ethylene Dibromide	µg/L	--	--	0.02
Antimony, Total Recoverable	µg/L	4,300	8,600	--
Arsenic, Total Recoverable	µg/L	30	59	--
Cadmium, Total Recoverable	µg/L	7.7	1.5	--
Chromium (VI) , Total Recoverable	µg/L	41	83	--
Copper, Total Recoverable	µg/L	2.9	5.8	--
Lead, Total Recoverable	µg/L	7.0	14	--
Mercury, Total Recoverable	µg/L	0.051	0.01	--
Nickel, Total Recoverable	µg/L	6.8	14	--
Selenium, Total Recoverable	µg/L	58	120	--
Silver, Total Recoverable	µg/L	1.1	2.2	--
Thallium, Total Recoverable	µg/L	6.3	13	--
Zinc, Total Recoverable	µg/L	47	95	--
Cyanide, Total	µg/L	0.50	1	--
2,3,7,8 TCDD	µg/L	1.4E-08	2.8E-08	--
TCDD Equivalents	µg/L	1.4E-08	2.8E-08	--
Acrolein	µg/L	780	1,600	--
Acrylonitrile	µg/L	0.66	1.3	--

Parameters	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
Benzene	µg/L	71	140	--
Bromoform	µg/L	360	720	--
Carbon Tetrachloride	µg/L	4.4	8.8	--
Chlorobenzene	µg/L	21,000	42,000	--
Chlorodibromomethane	µg/L	34	68	--
Dichlorobromomethane	µg/L	46	92	--
1,2-Dichloroethane	µg/L	99	200	--
1,1-Dichloroethylene	µg/L	3.2	6.4	--
1,2-Dichloropropane	µg/L	39	78	--
1,3-Dichloropropylene	µg/L	1,700	3,400	--
Ethylbenzene	µg/L	29,000	58,000	--
Methyl Bromide	µg/L	4,000	8,000	--
Methylene Chloride	µg/L	1,600	3,200	--
1,1,2,2-Tetrachloroethane	µg/L	11	22	--
Tetrachloroethylene	µg/L	8.9	18	--
Toluene	µg/L	200,000	400,000	--
1,2-Trans-Dichloroethylene	µg/L	140,000	280,000	--
1,1,2-Trichloroethane	µg/L	42	84	--
Trichloroethylene	µg/L	81	160	--
Vinyl Chloride	µg/L	530	1,000	--
2-Chlorophenol	µg/L	400	800	--
2,4-Dichlorophenol	µg/L	790	1,600	--
2,4-Dimethylphenol	µg/L	2,300	4,600	--
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	µg/L	770	1,500	--
2,4-Dinitrophenol	µg/L	14,000	28,000	--
Pentachlorophenol	µg/L	6.5	13	--
Phenol	µg/L	4,600,000	9,000,000	--
2,4,6-Trichlorophenol	µg/L	6.5	13	--
Acenaphthene	µg/L	2,700	5,400	--
Anthracene	µg/L	110,000	220,000	--
Benzidine	µg/L	0.00054	0.0011	--
Benzo(a)Anthracene	µg/L	0.049	0.098	--
Benzo(a)Pyrene	µg/L	0.049	0.098	--
Benzo(b)Fluoranthene	µg/L	0.049	0.098	--
Benzo(k)Fluoranthene	µg/L	0.049	0.098	--
Bis(2-Chloroethyl)Ether	µg/L	1.4	2.8	--
Bis(2-Chloroisopropyl)Ether	µg/L	170,000	340,000	--
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	12	--
Butylbenzyl Phthalate	µg/L	5,200	10,000	--
2-Chloronaphthalene	µg/L	4,300	8,600	--
Chrysene	µg/L	0.049	0.098	--
Dibenzo(a,h)Anthracene	µg/L	0.049	0.098	--
1,2-Dichlorobenzene	µg/L	17,000	34,000	--

Parameters	Units[6]	Effluent Limitations		
		AMEL	MDEL	Instantaneous Maximum
1,3-Dichlorobenzene	µg/L	2,600	5,200	--
1,4-Dichlorobenzene	µg/L	2,600	5,200	--
3,3 Dichlorobenzidine	µg/L	0.077	0.15	--
Diethyl Phthalate	µg/L	120,000	240,000	--
Dimethyl Phthalate	µg/L	2,900,000	5,800,000	--
Di-n-Butyl Phthalate	µg/L	12,000	24,000	--
2,4-Dinitrotoluene	µg/L	9.1	18	--
1,2-Diphenylhydrazine	µg/L	0.54	1.1	--
Fluoranthene	µg/L	370	740	--
Fluorene	µg/L	14,000	28,000	--
Hexachlorobenzene	µg/L	0.00077	0.0015	--
Hexachlorobutadiene	µg/L	50	100	--
Hexachlorocyclopentadiene	µg/L	17,000	34,000	--
Hexachloroethane	µg/L	8.9	18	--
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	0.098	--
Isophorone	µg/L	600	1,200	--
Nitrobenzene	µg/L	1,900	3,800	--
N-Nitrosodimethylamine	µg/L	8.1	16	--
N-Nitrosodi-n-Propylamine	µg/L	1.4	2.8	--
N-Nitrosodiphenylamine	µg/L	16	32	--
Pyrene	µg/L	11,000	22,000	--
Aldrin	µg/L	0.00014	0.00028	--
alpha-BHC	µg/L	0.013	0.026	--
beta-BHC	µg/L	0.046	0.092	--
gamma-BHC	µg/L	0.063	0.13	--
Chlordane	µg/L	0.00059	0.0012	--
4,4'-DDT	µg/L	0.00059	0.0012	--
4,4'-DDE (linked to DDT)	µg/L	0.00059	0.0012	--
4,4'-DDD	µg/L	0.00084	0.0017	--
Dieldrin	µg/L	0.00014	0.00028	--
alpha-Endosulfan	µg/L	0.0071	0.014	--
beta-Endosulfan	µg/L	0.0071	0.014	--
Endosulfan Sulfate	µg/L	240	480	--
Endrin	µg/L	0.0018	0.0038	--
Endrin Aldehyde	µg/L	0.81	1.6	--
Heptachlor	µg/L	0.00021	0.00042	--
Heptachlor Epoxide	µg/L	0.00011	0.00022	--
PCBs sum	µg/L	0.00017	0.00034	--
Toxaphene	µg/L	0.00016	0.00032	--

[1] In addition to an instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time.
[2] As specified in section IV of the MRP, Attachment E of this permit.
[3] pH shall remain within the limits of 6.5 and 8.5 s.u. at all times.
[4] As defined using Method 6410.

[5] Dissolved oxygen shall not be less than 5.0 mg/L at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 mg/L in waters with designated cold fresh-water habitat beneficial use.

[6] The concentraton-based effluent limitations stated in the table above are also applicable as mass-based effluent limitations expressed as lbs/day which are calculated as follows: Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. Parameter Concentration (if expressed as µg/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. The Flow Limit (MGD) value used in this equaton shall be the Discharger's maximum allowable flow rate limit specified in the NOA. The discharge shall not cause the calculated mass-based effluent limitations to be exceeded.

C. Effluent Limitations - Bays and Estuaries, including San Diego Bay but not including Buena Vista Lagoon

1. Discharges to bays and estuaries, including temporary discharges to San Diego Bay, but not including Buena Vista Lagoon, shall not exceed the effluent limitations specified in Table 8 below.

Table 8. Effluent Limitations for Discharges to Bays and Estuaries, including San Diego Bay, but not including Buena Vista Lagoon

Parameters	Units[9]	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum[1]	6-Month Median
Applicable to All Dischargers						
Settleable Solids	ml/L	1.0	1.5	--	3.0	--
Total Suspended Solids	mg/L	30	--	--	50	--
Turbidity	NTU	75	100	--	225	--
Chronic Toxicity	Pass/Fail	--	--	Pass[2]	--	--
pH	s.u.	--	--	--	6.0 – 9.0[3] 7.0 – 8.5	--
Based on Results of Reasonable Potential Analysis						
Hydrogen Sulfide	µg/L	2.0	--	4.0	10	--
Xylene	µg/L	--	--	--	5.0	--
Chlorinated Phenolics	µg/L	--	--	4.0	10	1
Base/Neutral Compounds[4]	µg/L	--	--	--	10	--
Total Petroleum Hydrocarbons	µg/L	--	--	--	500	--
Total Residual Chlorine	µg/L	--		8.0	60	2.0
Ammonia, Total	µg/L	--	--	2,400	6,000	600
Total Nitrogen	mg/L	--	--	--	2.0	1.0
Total Phosphorus	mg/L	--	--	--	0.2	0.1
Dissolved Oxygen	mg/L	--	--	--	5.0[5]	--
Methyl-tert-butyl Ether	µg/L	--	--	--	5.0	--
Antimony, Total Recoverable	µg/L	4,300	--	8,600	--	--
Arsenic, Total Recoverable	µg/L	30	--	59	--	--
Cadmium , Total Recoverable	µg/L	7.7	--	15	--	--
Chromium (VI), Total Recoverable	µg/L	41	--	83	--	--

Parameters	Units[9]	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum[1]	6-Month Median
Copper, Total Recoverable[10]	µg/L	2.9	--	5.8	--	--
Lead, Total Recoverable	µg/L	7.0	--	14	--	--
Mercury, Total Recoverable	µg/L	0.051	--	0.1	--	--
Nickel, Total Recoverable	µg/L	6.78	--	13.6	--	--
Selenium, Total Recoverable	µg/L	58	--	120	--	--
Silver, Total Recoverable	µg/L	1.11	--	2.24	--	--
Thallium, Total Recoverable	µg/L	6.3	--	13	--	--
Tributyltin	µg/L	0.0014	--	--	--	--
Zinc, Total Recoverable	µg/L	47	--	95	--	--
Cyanide, total	µg/L	0.50	--	1.00	--	--
TCDD Equivalents[6]	µg/L	3.90E-09	--	--	--	--
Acrolein	µg/L	780	--	1,600	--	--
Acrylonitrile	µg/L	0.66	--	1.3	--	--
Benzene	µg/L	--	--	--	5.0	--
Carbon Tetrachloride	µg/L	0.9	--	--	--	--
Chlorobenzene	µg/L	2,100	--	42,000	--	--
Chlorodibromomethane	µg/L	34	--	68	--	--
Dichlorobromomethane	µg/L	46	--	92	--	--
Dichloromethane	µg/L	450	--	--	5.0	--
1,2-Dichloroethane	µg/L	28	--	--	--	--
1,1-Dichloroethylene	µg/L	3.2	--	6.4	--	--
1,2-Dichloropropane	µg/L	39	--	78	--	--
1,3-Dichloropropylene	µg/L	1,700	--	3,400	--	--
Ethylbenzene	µg/L	--	--	--	5.0	--
Phenolic Compounds (non-chlorinated)	µg/L	--	--	1,200	300	30
1,1,2,2-Tetrachloroethane	µg/L	2.3	--	--	--	--
Tetrachloroethylene	µg/L	2.0	--	--	--	--
Toluene	µg/L	--	--	--	5.0	--
1,2-Trans-Dichloroethylene	µg/L	140,000	--	280,000	--	--
1,1,1-trichloroethane	µg/L	540,000	--	--	--	--
1,1,2-Trichloroethane	µg/L	9.4	--	--	--	--
Trichloroethylene	µg/L	27	--	--	--	--
Vinyl Chloride	µg/L	36	--	--	--	--
Chlorophenol	µg/L	400	--	800	--	--
2,4-Dichlorophenol	µg/L	790	--	1,600	--	--
2,4-Dimethylphenol	µg/L	2,300	--	4,600	--	--
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	µg/L	770	--	1,500	--	--
2,4-Dinitrophenol	µg/L	14,000	--	28,000	--	--
Pentachlorophenol	µg/L	6.5	--	13	--	--
Phenol	µg/L	4,600,00	--	9,200,000	--	--

Parameters	Units[9]	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum[1]	6-Month Median
2,4,6-Trichlorophenol	µg/L	6.5	--	13	--	--
Acenaphthene	µg/L	2,700	--	5,400	--	--
Anthracene	µg/L	110,000	--	220,000	--	--
Benzidine	µg/L	0.00054	--	0.0011	--	--
Benzo(a)Anthracene	µg/L	0.049	--	0.098	--	--
Benzo(a)Pyrene	µg/L	0.049	--	0.098	--	--
Benzo(b)Fluoranthene	µg/L	0.049	--	0.098	--	--
Benzo(k)Fluoranthene	µg/L	0.049	--	0.098	--	--
Bis(2-Chloroethyl)Ether	µg/L	1.4	--	2.8	--	--
Bis(2-Chloroisopropyl)Ether	µg/L	170,000	--	340,000	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	--	12	--	--
Butylbenzyl Phthalate	µg/L	5,200	--	10,000	--	--
2-Chloronaphthalene	µg/L	4,300	--	8,600	--	--
Chrysene	µg/L	0.049	--	0.098	--	--
Dibenzo(a,h)Anthracene	µg/L	0.049	--	0.098	--	--
1,2-Dichlorobenzene	µg/L	17,000	--	34,000	--	--
1,3-Dichlorobenzene	µg/L	2,600	--	5,200	--	--
1,4-Dichlorobenzene	µg/L	2,600	--	5,200	--	--
3,3 Dichlorobenzidine	µg/L	0.077	--	0.15	--	--
Diethyl Phthalate	µg/L	120,000	--	240,000	--	--
Dimethyl Phthalate	µg/L	2,900,000	--	5,800,000	--	--
Di-n-Butyl Phthalate	µg/L	12,000	--	24,000	--	--
2,4-Dinitrotoluene	µg/L	9.1	--	18	--	--
1,2-Diphenylhydrazine	µg/L	0.51	--	1.08	--	--
Fluoranthene	µg/L	370	--	742	--	--
Fluorene	µg/L	14,000	--	28,000	--	--
Hexachlorobenzene	µg/L	0.00077	--	0.0015	--	--
Hexachlorobutadiene	µg/L	50	--	100	--	--
Hexachlorocyclopentadiene	µg/L	17,000	--	3,400	--	--
Hexachloroethane	µg/L	8.9	--	18	--	--
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	--	0.098	--	--
Isophorone	µg/L	600	--	1,200	--	--
Nitrobenzene	µg/L	1,900	--	3,800	--	--
N-Nitrosodimethylamine	µg/L	8.1	--	16	--	--
N-Nitrosodi-n-Propylamine	µg/L	1.4	--	2.8	--	--
N-Nitrosodiphenylamine	µg/L	16	--	32	--	--
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	0.088	--	--	--	--
Pyrene	µg/L	11,000	--	22,000	--	--
Aldrin	µg/L	0.00014	--	0.00028	--	--
Chlordane	µg/L	0.00059	--	0.0012	--	--
4,4'-DDT	µg/L	0.00059	--	0.0012	--	--
4,4'-DDE (linked to DDT)	µg/L	0.00059	--	0.0012	--	--
4,4'-DDD	µg/L	0.00084	--	00.0017	--	--

Parameters	Units[9]	Effluent Limitations				
		AMEL	AWEL	MDEL	Instantaneous Maximum[1]	6-Month Median
Dieldrin	µg/L	0.00014	--	0.00028	--	--
Endosulfan	µg/L	--	--	0.018	0.027	0.009
Endrin	µg/L	0.0023	--	0.0038	--	--
Endrin Aldehyde	µg/L	0.81	--	1.63	--	--
Halomethanes[7]	µg/L	--	--	--	5.0	--
Heptachlor	µg/L	0.00021	--	0.00042	--	--
Heptachlor Epoxide	µg/L	0.00011	--	0.00022	--	--
Hexachlorocyclohexane (HCH)[8]	µg/L	--	--	0.008	0.012	0.004
PCBs sum	µg/L	0.00017	--	0.00034	--	--
Toxaphene	µg/L	0.00020	--	0.00033	--	--

[1] Instantaneous Maximum Effluent Limitation.

[2] As specified in section IV of the MRP, Attachment E of this permit.

[3] All bays and harbors shall be within 6.0 and 9.0 s.u. at all times. All saline lagoons (all lagoons with the exception of Buena Vista Lagoon) and estuaries of the region shall be within 7.0 and 8.5 s.u. at all times.

[4] As defined using Method 6410.

[5] Applied as an instantaneous minimum effluent limitation.

[6] 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

[7] The sum of bromoform, bromethane and chloromethane.

[8] The sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.

[9] The concentraton-based effluent limitations stated in the table above are also applicable as mass-based effluent limitations expressed as lbs/day which are calculated as follows: Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. Parameter Concentration (if expressed as µg/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. The Flow Limit (MGD) value used in this equaton shall be the Discharger's maximum allowable flow rate limit specified in the NOA. The discharge shall not cause the calculated mass-based effluent limitations to be exceeded.

[10] For discharges to the Shelter Island Yacht Basin and its sub-watershed, the AMEL and MDEL are non-detect for total recoverable copper using approved analytical laboratory methods and minimum levels for copper in compliance with Discharge Prohibition H.

2. Discharges to bays and estuaries, not including Buena Vista Lagoon, shall not exceed the effluent limitations for bacteria specified below:

Table 9. Bacteria Effluent Limitations for Discharges to Bays and Estuaries not Including Buena Vista Lagoon[1]

Parameters	Units	Effluent Limitations	
		30 day geometric mean	Single Sample Maximum
Total Coliform	Organisms/ 100 mL	1,000	10,000
Fecal Coliform	Organisms/ 100 mL	200	400
Enterococcus	Organisms/ 100 mL	35	104

[1] For discharges to Shelter Island Shoreline Park and its sub-watershed, the effluent limitations are non-detect for total coliform, fecal coliform and enterococcus using approved analytical laboratory methods and minimum levels in compliance with Discharge Prohibition J.

D. Effluent Limitations – Surf Zone of the Pacific Ocean

1. Discharges to the surf zone of the Pacific Ocean bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone designated with the contact water recreation use (REC-1) shall not exceed the effluent limitations specified below.

Table 10. Effluent Limitations for Discharges to the Surf Zone of the Pacific Ocean

Parameter	Units[11]	Effluent Limitations				
		AMEL	AWEL	6-month median	Daily Maximum	Instantaneous Maximum[1]
Applicable to All Dischargers						
Grease and Oil	mg/L	25	40	--	--	75
Suspended Solids	mg/L	60[3]	--	--	--	--
Settleable Solids	mL/L	1.0	1.5	--	--	3.0
Turbidity	NTU	75	100	--	--	225
pH	s.u.	--	--	--	--	6.0 – 9.0
Based on Results of Reasonable Potential Analysis						
Dissolved Oxygen	mg/L	--	--	--	--	5.0[2]
Arsenic, Total Recoverable	µg/L	--	--	23	120	310
Cadmium, Total Recoverable	µg/L	--	--	4	16	40
Chromium VI, Total Recoverable	µg/L	--	--	8	32	80
Copper, Total Recoverable	µg/L	--	--	6	42	110
Lead, Total Recoverable	µg/L	--	--	8	32	80
Mercury, Total Recoverable	µg/L	--	--	0.16	0.64	1.6
Nickel, Total Recoverable	µg/L	--	--	20	80	200
Selenium, Total Recoverable	µg/L	--	--	60	240	600
Silver, Total Recoverable	µg/L	--	--	2.3	11	28
Zinc, Total Recoverable	µg/L	--	--	56	300	780
Cyanide, Total	µg/L	--	--	4	16	40
Total Chlorine Residual	µg/L	--	--	8	32	240

Parameter	Units[11]	Effluent Limitations				
		AMEL	AWEL	6-month median	Daily Maximum	Instantaneous Maximum[1]
Ammonia (expressed as nitrogen)	µg/L	--	--	2,400	9,600	24,000
Acute Toxicity	TUa	--	--	NA	0.3	NA
Chronic Toxicity	TUc	--	--	NA	1	NA
Phenolic Compounds (non-chlorinated)	µg/L	--	--	120	480	1,200
Chlorinated Phenolics	µg/L	--	--	4	16	40
Endosulfan	µg/L	--	--	0.036	0.072	0.11
Endrin	µg/L	--	--	0.008	0.016	0.024
HCH[4]	µg/L	--	--	0.016	0.032	0.048
Acrolein	µg/L	880	--	--	--	--
Antimony	µg/L	4,800	--	--	--	--
Bis(2-chloroethoxy) Methane	µg/L	18	--	--	--	--
Bis(2-chloroisopropyl) ether	µg/L	4,800	--	--	--	--
Chlorobenzene	µg/L	2,300	--	--	--	--
Chromium (III)	µg/L	760,000	--	--	--	--
Di-n-butyl Phthalate	µg/L	14,000	--	--	--	--
Dichlorobenzenes	µg/L	20,000	--	--	--	--
Diethyl Phthalate	µg/L	130,000	--	--	--	--
Dimethyl Phthalate	µg/L	3,300,000	--	--	--	--
4,6-dinitro-2-methylphenol	µg/L	880	--	--	--	--
2,4-dinitrophenol	µg/L	16	--	--	--	--
Ethylbenzene	µg/L	16,000	--	--	--	--
Fluoranthene	µg/L	60	--	--	--	--
Hexachlorocyclopentadiene	µg/L	230	--	--	--	--
Nitrobenzene	µg/L	20	--	--	--	--
Thallium	µg/L	8	--	--	--	--
Toluene	µg/L	340,000	--	--	--	--
Total Petroleum Hydrocarbons	µg/L	--	--	--	--	500
Tributyltin	µg/L	0.0056	--	--	--	--
1,1,1-trichloroethane	µg/L	2,200,000	--	--	--	--
Xylene	µg/L	--	--	--	--	5.0
Acrylonitrile	µg/L	0.4	--	--	--	--
Aldrin	µg/L	0.000088	--	--	--	--
Benzene	µg/L	24	--	--	--	--
Benzidine	µg/L	0.00028	--	--	--	--
Beryllium	µg/L	0.13	--	--	--	--
Bis(2-chloroethyl) Ether	µg/L	0.18	--	--	--	--
Bis(2-ethlyhexyl) Phthalate	µg/L	14	--	--	--	--
Carbon Tetrachloride	µg/L	3.6	--	--	--	--
Chlordane[5]	µg/L	0.000092	--	--	--	--
Chlorodibromethane	µg/L	34	--	--	--	--
Chloroform	µg/L	520	--	--	--	--
DDT[6]	µg/L	0.00068	--	--	--	--
1,4-dichlorobenzene	µg/L	72	--	--	--	--
3,3'-dichlorobenzidine	µg/L	0.032	--	--	--	--

Parameter	Units[11]	Effluent Limitations				
		AMEL	AWEL	6-month median	Daily Maximum	Instantaneous Maximum[1]
1,2-dichloroethane	µg/L	110	--	--	--	--
1,1-dichloroethylene	µg/L	3.6	--	--	--	--
Dichlorobromomethane	µg/L	25	--	--	--	--
Dichloromethane	µg/L	1,800	--	--	--	--
1,3-dichloropropene	µg/L	36	--	--	--	--
Dieldrin	µg/L	0.00016	--	--	--	--
2,4-dinitrotoluene	µg/L	10	--	--	--	--
1,2-diphenylhydrazine	µg/L	0.64	--	--	--	--
Halomethanes[7]	µg/L	520	--	--	--	--
Heptachlor	µg/L	0.0002	--	--	--	--
Heptachlor Epoxide	µg/L	0.00008	--	--	--	--
Hexachlorobenzene	µg/L	0.00084	--	--	--	--
Hexachlorobutadiene	µg/L	56	--	--	--	--
Hexachloroethane	µg/L	10	--	--	--	--
Isophorone	µg/L	2,900	--	--	--	--
N-nitrosodimethylamine	µg/L	29	--	--	--	--
N-nitrosodi-N-propylamine	µg/L	1.5	--	--	--	--
N-nitrosodiphenylamine	µg/L	10	--	--	--	--
PAHs[8]	µg/L	0.035	--	--	--	--
PCBs[9]	µg/L	0.000076	--	--	--	--
TCDD equivalents[10]	µg/L	1.6E-08	--	--	--	--
1,1,2,2-tetrachloroethane	µg/L	9.2	--	--	--	--
Tetrachloroethylene	µg/L	8	--	--	--	--
Toxaphene	µg/L	0.00084	--	--	--	--
Trichloroethylene	µg/L	110	--	--	--	--
1,1,2-trichloroethane	µg/L	38	--	--	--	--
2,4,6-trichlorophenol	µg/L	1.2	--	--	--	--
Vinyl Chloride	µg/L	140	--	--	--	--

[1] Instantaneous maximum effluent limitation.

[2] Applied as an instantaneous minimum.

[3] The Discharger shall remove 75 percent of the suspended solids as a monthly average unless the average monthly influent is 80 mg/L or less, then the effluent limit shall be 60 mg/L.

[4] HCH shall mean the sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.

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

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

[7] Halomethanes shall mean the sum of bromoform, bromomethane and chloromethane.

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

[9] PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1016, aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

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

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

[11] The concentraton-based effluent limitations stated in the table above are also applicable as mass-based effluent limitations expressed as lbs/day which are calculated as follows: Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. Parameter Concentration (if expressed as µg/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day. The Flow Limit (MGD) value used in this equaton shall be the Discharger's maximum allowable flow rate limit specified in the NOA. The discharge shall not cause the calculated mass-based effluent limitations to be exceeded.

2. Discharges to the surf zone of the Pacific Ocean shall not exceed the effluent limitations for bacteria specified below:

Table 11. Bacteria Effluent Limitations for Discharges to the Surf Zone

Parameters	Units	Effluent Limitations[2]	
		30 day geometric mean	Single Sample Maximum
Total coliform	Organisms/ 100 mL	1,000	10,000[1]
Fecal Coliform	Organisms/ 100 mL	200	400
Enterococcus	Organisms/ 100 mL	35	104

[1] or 1000 when the ratio of fecal:total coliform exceeds 0.1.

[2] For discharges to Baby Beach in Dana Point, and the beaches specified in section VI.of Attachment B, the effluent limitations are non-detect for total coliform, fecal coliform and enterococcus using approved analytical laboratory methods and minimum levels in compliance with Discharge Prohibition J.

3. At all areas where shellfish may be harvested for human consumption, as determined by the Regional Water Board, the monthly median total coliform density shall not exceed 70/100 mL, and not more than 10 percent of the samples shall exceed 230/100 mL.

VI. RECEIVING WATER LIMITATIONS

The receiving water limitations set forth below for waters of the U.S. in the San Diego Region are based on applicable water quality standards contained in State water quality control plans and policies and federal regulations and are a required part of this Order. The discharge of waste regulated under this Order shall not cause or contribute to violations of receiving water limitations applicable to the authorized receiving water as set forth below:

A. Water Quality Objectives and Criteria

The discharge of waste shall not cause violations of water quality objectives, federal pollutant criteria or other provisions applicable to the authorized receiving water as contained in the State water quality control plans and policies and federal regulations set forth below:

1. The San Diego Water Board's Basin Plan, including beneficial uses, water quality objectives, and implementation plans;
2. State Water Board water quality control plans and policies including the:
   a. Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries (Thermal Plan);
   b. Water Quality Control Plan for Ocean Waters of California (Ocean Plan);
   c. Water Quality Control Policy for the Enclosed Bays and Estuaries of California;
   d. Policy for Implementation of Toxics Standards for Inland Surface Waters, and Enclosed Bays, and Estuaries of California (SIP); and
   e. Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality.
3. Priority pollutant criteria promulgated by the U.S. EPA through the:
   a. National Toxics Rule (NTR)[1] (promulgated on December 22, 1992 and amended on May 4, 1995); and
   b. California Toxics Rule (CTR).[2,3]

B. Receiving Water Limitations for Inland Surface Waters

1. Bacterial Characteristics

a. In waters designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period, shall not exceed a log mean 200/100 mL, nor shall more than 10 percent of the total samples during any 30-day period exceed 400/100 mL. [Basin Plan]

b. 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 for a five-tube decimal dilution test or 330 organisms per 100 ml when a three-tube decimal dilution test is used. [Basin Plan]

c. In waters designated for non-contact recreation (REC-2) and not designated for contact recreation (REC-1), the average fecal coliform concentrations for any 30- day period, shall not exceed 2,000 organisms per 100 ml nor shall more than 10 percent of samples collected during any 30-day period exceed 4,000 organisms per 100 ml. [Basin Plan]

2. Physical Characteristics

a. Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which otherwise adversely affect beneficial uses. [Basin Plan]

[1] 40 CFR Section 131.36.
[2] 65 Federal Register 31682-31719 (May 18, 2000), adding section 131.38 to 40 CFR.
[3] If a water quality objective and a CTR criterion are in effect for the same priority pollutant, the more stringent of the two applies.

b. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses. [Basin Plan]

c. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. [Basin Plan]

d. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. [Basin Plan]

e. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses. [Basin Plan]

f. Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses. [Basin Plan]

g. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Inland surface waters shall not contain turbidity in excess of the numerical objective described in Table 3-2 of the Basin Plan. [Basin Plan]

3. Chemical Charateristics

a. The dissolved oxygen concentration shall not at any time be less than 5.0 mg/L. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10% of the time. [Basin Plan]

b. The pH shall not be changed at any time more than 0.2 units from normal ambient pH. The pH shall not be depressed below 7.0 nor raised above 9.0. [Basin Plan]

c. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses. [Basin Plan]

d. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH3) to exceed 0.025 mg/l (as N). [Basin Plan]

e. No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife or aquatic organisms. [Basin Plan]

f. The discharge of waste to inland surface waters designated for use as domestic or municipal supply (MUN) shall not contribute to concentrations of toxics in excess of the maximum contaminant levels (MCLs) for inorganic pollutants set forth in the CCR, title 22, division 4, chapter 15, article 4.1, section 64435 and organic pollutants set forth in title 22, division 4, chapter 15, article 5.5, Section 64444A.

g. The discharge of waste to inland surface waters shall not contribute to concentrations in excess of the mineral objectives specified in Table 3-2 of the Basin Plan.

4. Radioactivity Characteristics

a. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life. [Basin Plan]

b. The radioactivity in the receiving waters shall not exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 1, section 30253 of the CCR.

5. Toxicity Characteristics

a. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the San Diego Water Board. [Basin Plan]

C. Receiving Water Limitations for Bays, Estuaries, and Coastal Lagoons

1. Bacterial Characteristics

a. 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 for a five-tube decimal dilution test or 330 organisms per 100 ml when a three-tube decimal dilution test is used. [Basin Plan]

b. In bays and estuaries designated for contact recreation (REC-1), the most probable number of total coliform organisms in the upper 60 feet of the water column shall be less than 1,000 organisms per 100 ml (10 organisms per ml); provided that not more than 20 percent of the samples at any sampling station, in any 30-day period, may exceed 1,000 organisms per 100 ml (10 per ml); and provided further that no single sample as described below is exceeded. The most probable number of total coliform organisms in the upper 60 feet of the water column in no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 organisms per 100 ml (100 organisms per ml). [Basin Plan]

c. In waters designated for non-contact recreation (REC-2) and not designated for contact recreation (REC-1), the average fecal coliform concentrations for any 30- day period, shall not exceed 2,000 organisms per 100 ml nor shall more than 10 percent of samples collected during any 30-day period exceed 4,000 organisms per 100 ml. [Basin Plan]

d. In San Diego Bay where bay waters are used for whole fish handling, the density of E. coli shall not exceed 7 organisms per mL in more than 20 percent of any 20 daily consecutive samples of bay water. [Basin Plan]

2. Physical Characteristics

a. Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or which otherwise adversely affect beneficial uses. [Basin Plan]

b. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses. [Basin Plan]

c. Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses. [Basin Plan]

d. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses. [Basin Plan]

e. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses. [Basin Plan]

f. Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses. [Basin Plan]

g. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. The transparency of waters in lagoons and estuaries shall not be less than 50% of the depth at locations where measurement is made by means of a standard Secchi disk, except where lesser transparency is caused by rainfall runoff from undisturbed natural areas and dredging projects conducted in conformance with waste discharge requirements of the San Diego Water Board. With these two exceptions, increases in turbidity attributable to controllable water quality factors shall not exceed 20% over natural turbidity levels at locations with a natural turbidity of 0 to 50 NTU; 10 NTU at locations with a natural turbidity of 50 to 100 NTU; and 10% over the natural turbidity level in locations with a natural turbidity of greater than 100 NTU. [Basin Plan]

h. Within San Diego Bay, the transparency of bay waters, insofar as it may be influenced by any controllable factor, either directly or through induced conditions, shall not be less than 8 feet in more than 20 percent of the readings in any zone, as measured by a standard Secchi disk. Wherever the water is less than 10 feet deep, the Secchi disk reading shall not be less than 80 percent of the depth in more than 20 percent of the readings in any zone. [Basin Plan]

3. Chemical Charateristics

a. The dissolved oxygen concentration shall not at any time be less than 5.0 mg/L. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than 10% of the time. [Basin Plan]

b. The pH shall not be changed at any time more than 0.2 units from normal ambient pH. The pH shall not be depressed below 7.0 nor raised above 9.0. [Basin Plan]

c. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses. [Basin Plan]

d. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH3) to exceed 0.025 mg/l (as N). [Basin Plan]

e. No individual pesticide or combination of pesticides shall be present in the water column, sediments or biota at concentration(s) that adversely affect beneficial uses. Pesticides shall not be present at levels which will bioaccumulate in aquatic organisms to levels which are harmful to human health, wildlife or aquatic organisms. [Basin Plan]

f. The discharge of waste to inland surface waters designated for use as domestic or municipal supply (MUN) shall not contribute to concentrations of toxics in excess of the maximum contaminant levels (MCLs) for inorganic pollutants set forth in the CCR, Title 22, Division 4, Chapter 15, Article 4.1, Section 64435 and organic pollutants set forth in Title 22, Division 4, Chapter 15, Article 5.5, Section 64444A.

4. Radioactivity Characteristics

a. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life. [Basin Plan]

b. The radioactivity in the receiving waters shall not exceed limits specified in title 17, division 1, chapter 5, subchapter 4, group 3, article 1, section 30253 of the CCR.

5. Toxicity Characteristics

a. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic

life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the San Diego Water Board. [Basin Plan]

b. Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities. [Bays and Estuaries Plan]

c. Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health. [Bays and Estuaries Plan]

D. Receiving Water Limitations for Ocean Waters

1. Bacterial Characteristics

For discharges of waste to the Pacific Ocean, within a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour, whichever is further from the shoreline, and in areas outside this zone used for water contact sports, as determined by the San Diego Water Board (waters designated as REC-1), the following bacterial objectives shall be maintained throughout the water column [Ocean Plan]:

a. 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.

b. Single Sample Maximum

i. Total coliform density shall not exceed 10,000 per 100 ml;
ii. Fecal coliform density shall not exceed 400 per 100 ml;
iii. Enterococcus density shall not exceed 104 per 100 ml; and
iv. Total coliform density shall not exceed 1,000 per 100 ml when the fecal coliform/total coliform ratio exceeds 0.1.

2. Physical Characteristics

a. Floating particulates and grease and oil shall not be visible [Ocean Plan].

b. The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface [Ocean Plan].

c. Natural light shall not be significantly reduced at any point [Ocean Plan].

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

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 [Ocean Plan].

b. The pH shall not be changed at any time more than 0.2 units which occur naturally [Ocean Plan].

c. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above the present under natural conditions [Ocean Plan].

d. The concentration of substances set forth in chapter II, table 1 of the Ocean Plan (2012), in marine sediments shall not be increased to levels which would degrade indigenous biota [Ocean Plan].

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

f. Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota [Ocean Plan].

g. Numerical water quality objectives contained in chapter II, table 1 of the Ocean Plan [Ocean Plan].

4. Biological Characteristics

a. Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded [Ocean Plan].

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

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 [Ocean Plan].

5. Radioactivity Characterisitcs

a. The discharge of radioactive waste shall not degrade marine life [Ocean Plan].

VII. 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. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

a. The Discharger shall comply with all applicable federal, state, and local laws and regulations for handling, transport, treatment, or disposal of waste.

b. A copy of this Order and the NOA shall be maintained onsite at the groundwater extraction facility, and shall be available to operating personnel, at all times.

c. The Discharger shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the discharge requirements of this Order and the NOA, including the completion of such accelerated or additional monitoring as may be necessary and required through a CWC sections 13267 and 13383 to determine the nature, extent, and effect of the noncomplying discharge.

B. Monitoring and Reporting Program (MRP) Requirements

1. The Discharger shall comply with the MRP, and any future revisions thereto, in Attachment E of this Order, including any additional monitoring requirements specified in the NOA.

2. Notifications required to be provided to this San Diego Water Board shall be made to:

E-mail – sandiego@waterboards.ca.gov

Telephone – (619) 516-1990
Facsimile – (619) 516-1994

C. Special Provisions

1. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

If the discharge causes or contributes to chronic toxicity in the effluent, a Toxicity Reduction Evaluation (TRE) shall be required as defined in section IV of the MRP. The San Diego Water Board shall require the Discharger to conduct a TRE if repeated tests reveal toxicity as a result of waste discharge under this Order. The Discharger shall take all reasonable steps to control toxicity once the source of toxicity is identified. Failure to conduct the required toxicity tests or a TRE shall result in the establishment of effluent limitations for chronic toxicity under this Order and/or appropriate enforcement action.

2. Other Special Provisions

a. The Discharger shall dispose of solids removed from liquid wastes in a manner that is consistent with title 27 of the CCR and approved by the San Diego Water Board.

b. This Order expires on September 30, 2020, after which, the terms and conditions of this permit are automatically continued pending issuance of a new Order, provided that all requirements of U.S. EPA's NPDES regulations at 40 CFR section 122.6 and the State's regulations at CCR title 23, section 2235.4 regarding the continuation of expired NPDES Permits and waste discharge requirements are met.

c. The San Diego Water Board or Director of the U.S. EPA may require a person requesting coverage under this Order or subject to waste discharge requirements under this Order to apply for and obtain an individual NPDES permit. Cases where an individual NPDES permit may be required include, but are not limited to those described in 40 CFR sections 122.28(b)(3)(i) and (b)(3)(ii).

VIII. REOPENER PROVISIONS

This Order, or coverage under this Order, may be amended, modified, revoked and/or reissued, or terminated for cause at any time prior to its expiration in accordance with the provisions of 40 CFR sections 122.44, 122.62 to 122.64, 125.62, and 125.62, including, but not limited to, any of the following circumstances:

A. Violation of any terms or conditions of this Order or the NOA from the San Diego Water Board;

B. Obtaining enrollment under this Order , or a NOA from the San Diego Water Board, by misrepresentation or failure to disclose fully all relevant facts;

C. A change in any condition that requires or results in either a temporary or permanent reduction or elimination of the authorized discharge;

D. A finding based on data or other sources, by the San Diego Water Board, that continued discharges may cause unreasonable degradation of the aquatic environment;

E. Modification is warranted to address acute or chronic toxicity in groundwater extraction discharges or receiving waters through new or revised effluent limitations or other permit toxicity requirements or to implement new, revised, or newly interpreted water quality standards applicable to acute or chronic toxicity;

F. Modification is warranted to address an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) promulgated under section 307 (a) of the CWA for a toxic pollutant where that standard or prohibition is more stringent than any limitation on the pollutant in this Order;

G. Modification is warranted to include new Minimum Levels (MLs) in accordance with the provisions set forth in 40 CFR parts 122 and 124;

H. Modification is warranted to incorporate a new or revised water quality objective that has come into effect or applicable requirements of a total maximum daily load (TMDL) that is adopted or revised;

I. Modification is warranted to incorporate additional effluent limitations, prohibitions, and requirements, based on the results of additional monitoring required by the MRP (Attachment E) of this Order; or

J. Modification of the receiving waters MRP and/or special studies requirements of this Order is necessary for cause, including but not limited to a) revisions necessary to implement recommendations from Southern California Coastal Water Research Project (SCCWRP); b) revisions necessary to develop, refine, implement, and/or coordinate a regional monitoring program; and/or c) revisions necessary 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.

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

IX. COMPLIANCE DETERMINATION

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

A. General

Compliance with effluent limitations shall be determined using sample reporting protocols defined below and in the MRP in Attachment E of this Order. For purposes of reporting and administrative enforcement by the San Diego Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the constituent in the monitoring sample is greater than the effluent limitation and greater than or equal to the minimum level (ML) or lowest quantifiable level.

B. Multiple Sample Data

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. 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.
2. 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.

C. Sample Reporting Protocol

1. The Discharger must report with each sample result the acceptable reported ML and the laboratory's current Method Detection Limit (MDL).

2. The Discharger must also report 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 must be reported "as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, must be reported as "Detected, but Not Quantified", or DNQ. 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.

D. Compliance with Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation for the purpose of assessing mandatory minimum penalties under CWC section 13385, though the Discharger will be considered out of compliance for each discharge day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) for discretionary penalties. 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 all days when a discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month and no penalty assessed.

E. Compliance with Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week (Sunday through Saturday) exceeds the AWEL for a given parameter, this will represent a single violation for the purpose of assessing mandatory minimum penalties under CWC section 13385, though the Discharger will be considered out of compliance for each discharge day of that week for that parameter (e.g., resulting in seven days of non-compliance) for discretionary penalties. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance only for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week and no penalty assessed.

F. Compliance with Maximum Daily Effluent Limitation (MDEL)

The MDEL shall apply to flow weighted 24-hour composite samples, or grab samples, 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.

G. Compliance with Instantaneous Minimum Effluent Limitation

If the analytical result of a single 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 are both lower than the instantaneous minimum effluent limitation would result in two instances of noncompliance with the instantaneous minimum effluent limitation.

H. Compliance with Instantaneous Maximum Effluent Limitation

If the analytical result of a single 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).

I. Six-Month Median Effluent Limitation (SMEL)

The Discharger shall determine the six-month median effluent value (SMEV) for a given parameter by calculating the statistical median of all daily effluent values (DEVs) for each parameter within each six-month calendar period (January-June and July-December). The SMEV determination for a given six-month calendar period shall not include DEVs from any other six-month calendar period. If only a single DEV is obtained for a parameter during a six-month calendar period, that DEV shall be considered the SMEV for that parameter for that given six-month calendar period. The SMEV shall be attributed to each day of the six-month calendar period for determination of compliance with the six-month median effluent limitation (SMEL) for a given parameter for each day of that given six-month calendar period, resulting in approximately 180 days of non-compliance depending on the number of days in the six-month calendar period. If the SMEV exceeds the six-month median, the Discharger will be considered out of compliance for each day for the six-month period. The SMEV cannot be determined for any six month calendar period during which no DEV is obtained.

J. Median Monthly Effluent Limit (MMEL)

If the median result of three independent toxicity tests, conducted within the same calendar month, and analyzed using the Test for Significant Toxicity (TST) is a “fail” (i.e. two out of three is “fail”), this will represent a single violation for the purpose of assessing mandatory minimum penalties under CWC section 13385, though the Discharger will be considered out of compliance for each discharge day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) for discretionary penalties. If the median result is “fail”, the Discharger will be considered out of compliance for days when the discharge occurs. For any one calendar month during which fewer than three samples are taken, no compliance determination can be made for that calendar month.

K. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from chronic toxicity tests using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1.
The null hypothesis (Ho) for the TST statistical approach is:

Ho = Mean discharge instream waste concentration (IWC) response ≤ 0.75 × Mean control response.

A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent Effect" at the discharge IWC is defined and reported as:

$$\text{Percent Effect} = \frac{\text{(Mean control response - Mean discharge IWC response)}}{\text{(Mean control response)}} \times 100$$

This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations—in the case of whole effluent toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail" and the "Percent Effect" is ≥ 50%.

The chronic toxicity MDEL is set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013). The San Diego Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at IV.C.5). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the NOEC and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the San Diego Water Board (40 CFR section 122.41(h)). The San Diego Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed. The Board may consider results of any Toxicity Reduction Evaluation / Toxicity Identification Evaluation (TRE/TIE) studies in an enforcement action.

ATTACHMENT A – ABBREVIATIONS AND DEFINITIONS

Part 1. – Abbreviations

Abbreviation	Definition
AMEL	Average Monthly Effluent Limitation
ASBS	Areas of Special Biological Significance
AWEL	Average Weekly Effluent Limitation
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practice(s)
BPJ	Best Professional Judgement
BPT	Best Practicable Treatment Control Technology
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CIWQS	California Integrated Water Quality System
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
DDT	Dichlorodiphenyltrichloroethane
Dm	Initial Dilution
DNQ	Detected, but Not Quantified
ECA	Effluent Concentration Allowance
ELAP	Environmental Laboratory Accreditation Program
ELG	Effluent Limitation Guidelines
gpd	Gallons per Day
HCH	Hexachlorocyclohexane
IWC	Instream waste concentration
µg	Microgram
µg/L	Micrograms per Liter
lbs/day	Pounds per Day
LC 50	Percent Waste Giving 50 Percent Survival of Test Organisms
LTA	Long Term Average
mg/L	Milligrams per Liter
ml/L	Milliliters per Liter
MBAS	Methylene Blue Activated Substances
MCL	Maximum Contaminant Levels
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MER	Mass Emission Rate
MGD	Million Gallons per Day
ML	Minimal Level
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
MTBE	Methyl-tert-butyl ether
MUN	Municipal and Domestic Supply Beneficial Use
ND	Not Detected

Abbreviation	Definition
NTU	Nephelometric Turbidity Unit
NPDES	National Pollutant Discharge Elimination System
NOA	Notice of Applicability
NOEL	No Observed Effect Level
NOEX	Notice of Exclusion
NOI	Notice of Intent
NOT	Notice of Termination
NSPS	New Source Performance Standard
NTR	National Toxics Rule
Ocean Plan	California Ocean Plan, Water Quality Control Plan Ocean Waters Of California
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PDF	Portable Document Format
REC-1	Contact Water Recreation Beneficial Use
REC-2	Non-contact Water Recreation Beneficial Use
RL	Reporting Level
RMD	Regulatory Management Decision
RPA	Reasonable Potential Analysis
RWD	Report of Waste Discharge
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SCCWRP	Southern California Coastal Waters Research Project
SHELL	Shellfish Harvesting Beneficial Use
SIP	Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California
SIYB	Shelter Island Yacht Basin
SMR	Self Monitoring Report
State Water Board	State Water Resources Control Board
TBEL	Technology-Based Effluent Limitations
TCDD	Tetrachlorodibenzo dioxin and congeners
Thermal Plan	Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE	Toxicity Reduction Evaluation
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
TUa	Toxic Units Acute
TUc	Toxic Units Chronic
USEPA	United Stated Environmental Protection Agency
U.S.	United States
WDID	Waste Discharge Identification number
WDR	Waste Discharge Requirements
WER	Water Effect Ratio
WET	Whole Effluent Toxicity
WLA	Wasteload Allocations
WQBEL	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards

Part 2. – Glossary of Common Terms

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.

Clean Water Act (CWA)
The Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483.

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

Contamination
"Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected. [CWC section 13050(k)]

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.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Discharger
Any person that is authorized to discharge extracted groundwater under this Order through an approved NOA issued by the San Diego Water Board.

Effluent Concentration Allowance (ECA)

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays are 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 the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays of the San Diego Region include, but are not limited to, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters of the San Diego Region include, but are not limited to, the Tijuana River Estuary, the Mouth of San Diego River, Famosa Slough and Channel, Los Penasquitos Lagoon, San Dieguito Lagoon, Batiquitos Lagoon, San Elijo Lagoon, Agua Hedionda Lagoon, Buena Vista Lagoon, Loma Alta Slough, Mouth of San Luis Rey River, Santa Margarita Lagoon, Aliso Creek Mouth, San Juan Creek Mouth, San Mateo Creek Mouth, and the San Onofre Creek Mouth. . Estuaries do not include inland surface waters or ocean waters.

Extraction
Extraction is the act of forcibly withdrawing groundwater from the sub surface. Extraction through mechanical means is termed “active” extraction, such as when using pumps to extract groundwater. Alternatively, “passive” extraction is through the use of gravity, such as with a french drain or weep hole.

Groundwater
Groundwater means any water, except capillary moisture, located beneath the land surface in soil pore spaces and in the fractures of rock formations or beneath the bed of any river, stream, lake, reservoir, or other body of surface water, whatever the subsurface geologic structure in which such water stands, flows, percolates or otherwise occurs.

Groundwater Extraction Discharge
The discharge of groundwater removed from the ground or drainage collection systems to lower groundwater levels or pressures, control or eliminate groundwater seepage or leakage, stabilize slopes and other earth structures or form part of a system to remediate groundwater contamination. Groundwater extraction discharges are associated with groundwater control systems employed in construction and foundation dewatering projects, trench and ditch dewatering projects, underground monitoring wells, tank removal projects, groundwater remediation projects, permanent groundwater drainage and seepage control projects and other similar activities. The term as used in this Order does not include permanent groundwater extraction discharges to San Diego Bay or its tributaries under tidal influence with the exception of the discharge to San Diego Bay from the permanent groundwater drainage control system at One America Plaza in the City of San Diego

Hardness
A characteristic of water caused mainly by the salts of calcium and magnesium, such as bicarbonate, carbonate, sulfate, chloride and nitrate. Hardness or total hardness is generally defined as the sum of the calcium and magnesium concentrations expressed in milligrams per liter of equivalent calcium carbonate.

Inland Surface Waters
All surface waters of the San Diego Region exclusive of the waters of the Pacific Ocean, enclosed bays and estuaries, coastal lagoons, and groundwaters. Inland Surface Waters includes reservoirs and lakes.

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

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

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL)
MDL is 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 in 40 CFR part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is 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.

MS4 Operator
The municipal separate storm sewer system (MS4) operator is the entity responsible for the operation of its local MS4 subject to an MS4 NPDES Permit.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Nuisance
"Nuisance" means 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 waste. [Water Code section 13050(m).

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. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan

Pollutants
Substances defined in Clean Water Act section 502(6) (33 U.S.C. section 1362(6)), and incorporated by reference into CWC section 13373.

Pollution
“Pollution” means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects either of the following: (A) The waters for beneficial uses. (B) Facilities which serve these beneficial uses. “Pollution” may include “contamination.” [Water Code section 13050(l)

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. 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 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. 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 RL.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Test of Significant Toxicity (TST)
A statistical approach used to analyze toxicity test data. The TST incorporates a restated null hypothesis, Welch’s t-test, and biological effect thresholds for chronic and acute toxicity.

Toxicity Reduction Evaluation (TRE)
TRE is 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.)

Water Quality Standards
Water quality standards, as defined in CWA Section 303(c) and 40 CFR section 131.6, consist of 1) the beneficial uses of a water body, 2) criteria (referred to as water quality objectives in California law) to protect those uses, and 3) an anti-degradation policy. Under state law, the water boards establish beneficial uses and water quality objectives in their water quality control or basin plans. Together with an anti-degradation policy (State Water Board Resolution 68-16), these beneficial uses and water quality objectives serve as water quality standards under the CWA. In CWA parlance, state beneficial uses are called “designated uses” and state water quality objectives are called “criteria.” Throughout this Order, the relevant term is used depending on the statutory scheme. The water quality standards described in section V of this Order are enforceable receiving water limitations for the surface water bodies for which they are established.

Waters of the United States
Waters of the United States are defined as: “(a) All waters, which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; (b) All interstate waters, including interstate “wetlands;” (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation or destruction of which would affect or could affect interstate or foreign commerce including any such waters: (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes; (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or (3) Which are used or could be used for industrial purpose by industries in interstate commerce; (d) All impoundments of waters otherwise defined as waters of the United States under this definition: (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition; (f) The territorial seas; and (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.” (40 CFR 122.2)

ATTACHMENT B – APPLICABLE TOTAL MAXIMUM DAILY LOADS

TOTAL MAXIMUM DAILY LOADS APPLICABLE TO ORDER NO. R9-2015-0013

This attachment presents the wasteload allocations (WLAs) of the Total Maximum Daily Loads (TMDLs) adopted by the San Diego Water Board and approved by U.S. EPA under Clean Water Act section 303(c), applicable to discharges regulated under this Order. This attachment discusses the applicability of the following TMDLs within the San Diego Region:

I. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed

II. Total Maximum Daily Load for Dissolved Copper in Shelter Island Yacht Basin

III. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed

IV. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek

V. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay

VI. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

VII. Total Maximum Daily Load for Sedimentation in Los Penasquitos Lagoon

I. Total Maximum Daily Load for Diazinon in Chollas Creek Watershed

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2002-0123

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	August 14, 2002
State Water Board Approval Date:	July 16, 2003
Office of Administrative Law Approval Date:	September 11, 2003
U.S. EPA Approval Date:	November 3, 2003

3. TMDL Effective Date: September 11, 2003

4. Watershed Management Area: San Diego Bay

5. Water Body: Chollas Creek

B. Final TMDL Compliance Requirements

Resolution No. R9-2002-0123 establishes WLAs for the discharge of diazinon to Chollas Creek from MS4 systems for the City of San Diego, City of Lemon Grove, City of La Mesa, San Diego Unified Port District, County of San Diego, and CalTrans. Resolution No. R9-2002-0123 does not establish an applicable WLA for the discharge of extracted groundwater, effectively

resulting in a prohibition to discharge diazinon to Chollas Creek. Consistent with the requirements of Resolution No. R9-2002-0123, Order No. R9-2007-0034 prohibited the discharge of diazinon to Chollas Creek. Consistent with the requirements of Resolution No. R9-2002-0123, this Order prohibits the discharge of diazinon to Chollas Creek in section IV of this Order.

II. Total Maximum Daily Loads for Dissolved Copper in Shelter Island Yacht Basin

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2005-0019

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	September 22, 2005
Office of Administrative Law Approval Date:	December 2, 2005
U.S. EPA Approval Date:	February 8, 2006

3. TMDL Effective Date: December 2, 2005

4. Watershed Management Area: San Diego Bay

5. Water Body: Shelter Island Yacht Basin

B. Final TMDL Compliance Requirements

Resolution No. R9-2005-0019 establishes WLAs for the discharge of copper into Shelter Island Yacht Basin (SIYB). Identified Dischargers of copper loading include the San Diego Unified Port District, SIYB marina owner/operators, persons owning boats moored in SIYB, SIYB underwater hull cleaners, and the City of San Diego MS4. The TMDL does not provide WLAs or reserved assimilative capacity for additional point sources. Consistent with the requirements of Resolution No. R9-2005-0019, Order No. R9-2007-0034 prohibited the discharge of copper to Shelter Island Yacht Basin. Consistent with the requirements of Resolution No. R9-2005-0019 this Order prohibits the discharge of copper to Shelter Island Yacht Basin in section IV of this Order.

III. Total Maximum Daily Loads for Total Nitrogen and Total Phosphorus in Rainbow Creek Watershed

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2005-0036

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 9, 2005
State Water Board Approval Date:	November 16, 2005
Office of Administrative Law Approval Date:	February 1, 2006
U.S. EPA Approval Date:	March 22, 2006

3. TMDL Effective Date: February 1, 2006

4. Watershed Management Area: Santa Margarita River

5. Water Body: Rainbow Creek

B. Final TMDL Compliance Requirements

Resolution No. R9-2005-0036 establishes WLAs and LAs for the discharge of total nitrogen and total phosphorus into Rainbow Creek. Identified dischargers of total nitrogen and total phosphorus loading include Caltrans, County of San Diego, and other nonpoint dischargers.

The TMDL provides WLAs of 2 percent of the total annual TMDL for both total nitrogen and total phosphorus for additional point sources, however the TMDL Implementation Action Plan does not provide for the assignment of WLAs to unidentified point source discharges, effectively resulting in the prohibition of discharges of total nitrogen and total phosphorus into Rainbow Creek.

IV. Total Maximum Daily Loads for Dissolved Copper, Lead, and Zinc in Chollas Creek

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2007-0043

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 13, 2007
State Water Board Approval Date:	July 15, 2008
Office of Administrative Law Approval Date:	October 22, 2008
U.S. EPA Approval Date:	December 18, 2008

3. TMDL Effective Date: October 22, 2008

4. Watershed Management Area: San Diego Bay

5. Water Body: Chollas Creek

B. Final TMDL Compliance Requirements

Resolution No. R9-2007-0043 establishes WLAs for the discharge of copper, lead and zinc to Chollas Creek from point sources. Specifically, Resolution No. R9-2007-0043 states, “Actions to meet the WLAs in discharges to Chollas Creek will be required in WDRs that regulate MS4 discharges, industrial facility and construction activity storm water discharges, and groundwater extraction discharges in the Chollas Creek watershed.”

The TMDL establishes concentration-based WLAs set equal to 90 percent of the numeric water quality objectives for copper, lead, and zinc, as defined in the California Toxics Rule. Because the concentration of these metals resulting in toxic effects varies significantly with hardness, the resulting WLAs are hardness dependent.

Table B-1: Final Receiving Water Limitations Expressed as Concentrations in Chollas Creek

Constituent	Exposure Duration	Applicable WLA (µg/L)	Averaging Period
Dissolved Copper	Acute	$(0.96) \times e^{[0.9422 \times \ln(\text{hardness}) - 1.700]} \times \text{WER}^{[1]}$	1 hour
	Chronic	$(0.96) \times e^{[0.8545 \times \ln(\text{hardness}) - 1.702]} \times \text{WER}^{[1]}$	4 days
Dissolved Lead	Acute	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 1.460]} \times \text{WER}^{[1]}$	1 hour
	Chronic	$[1.46203 - 0.145712 \times \ln(\text{hardness})] \times e^{[1.273 \times \ln(\text{hardness}) - 4.705]} \times \text{WER}^{[1]}$	4 days
Dissolved Zinc	Acute	$(0.978) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^{[1]}$	1 hour
	Chronic	$(0.986) \times e^{[0.8473 \times \ln(\text{hardness}) + 0.884]} \times \text{WER}^{[1]}$	4 days

[1] The Water Effect Ratio (WER) is assumed to be 1.0 unless there is a site-specific and chemical-specific WER provided in the Basin Plan.

Table B-2: Resulting WLAs for Various Hardness Values

Parameter[1]	Units	Hardness (mg/L)					
		Up to 200		200 - 300		300 and above	
		Acute	Chronic	Acute	Chronic	Acute	Chronic
Copper	µg/L	23.2	14.6	34.1	20.6	44.7	26.4
Lead	µg/L	123	4.8	188	7.3	253	9.8
Zinc	µg/L	190	191	268	270	341	344

[1] All metals are expressed as total recoverable.

Consistent with the procedures specified in the SIP, and provided in section IV.C.5 of Attachment F, final hardness dependent, water quality-based effluent limitations for copper, lead, and zinc have been established for discharges to Chollas Creek. Resolution No. R9-2007-0043 requires that regulated extracted groundwater discharges to Chollas Creek must meet the WLAs at the initiation of the discharge, thus compliance with the effluent limitations in secton IV of this Order is required upon the effective date of this Order.

Additionally, Resolution No. R9-2007-0043 required Dischargers that discharge to Chollas Creek to monitor the receiving water for the purpose of assessing the effectiveness of the management practices implemented to meet the TMDL allocations. As such, receiving water monitoring for copper, lead, and zinc has been established in this Order for Dischargers to Chollas Creek.

V. Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2008-0027

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 11, 2008
State Water Board Approval Date:	June 16, 2009
Office of Administrative Law Approval Date:	September 15, 2009
U.S. EPA Approval Date:	October 26, 2009

3. TMDL Effective Date: September 15, 2009

4. Watershed Management Areas: See Table Below

5. Water Bodies: See Table Below

Table B-3: Applicability of Total Maximum Daily Loads for Indicator Bacteria Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay

Watershed Management Area	Water Body	Segment or Area	Responsible Dischargers
South Orange County	Dana Point Harbor	Baby Beach	City of Dana Point County of Orange
San Diego Bay	San Diego Bay	Shelter Island Shoreline Park	San Diego Unified Port

B. Final TMDL Compliance Requirements

Resolution No. R9-2008-0027 establishes WLAs for the discharge of indicator bacteria to Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay. The indentified point sources are limited to MS4s.

Attachment A of Resolution No. R9-2008-0027 states, “The only allowable point source identified was urban runoff discharged from MS4s, which was assigned a WLA for each watershed.” However, section (B)(1) of Attachment A further states, “The TMDLs will be implemented primarily by reissuing or revising the existing NPDES waste discharge requirements for MS4 discharges to include water quality based effluent limitations (WQBELs) that are consistent with the assumptions and requirements of the bacteria WLAs for MS4 discharges, though there may be other or new point sources. NPDES requirements should be issued, reissued, or revised as expeditiously as practicable to incorporate WQBELs derived from the TMDL WLAs.” Based on the statements made within the TMDL, although the TMDL does not establish a WLA for individual point sources, the TMDL recognizes that point sources exist and that WQBELs must be established as NPDES permit requirements.

For point sources currently regulated under NPDES requirements, the TMDL requires WQBELs that are consistent with the assumptions and requirements of the WLAs should be incorporated

into NPDES requirements. Currently the only WLAs are for MS4s, and the TMDL does not provide additional guidance on how to derive WQBELs from the TMDL WLAs. However, the TMDL does prescribe a total loading for the indicator bacteria under wet and dry conditions. In both cases, the entire available loading has been provided to municipal MS4 Dischargers, thus no remaining assimilative capacity exists for point source. Thus, the available WLA remaining for point sources is zero, and groundwater extraction discharges of indicator bacteria to the applicable receiving waters must be prohibited in section IV this Order.

VI. Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2010-0001

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	February 10, 2010
State Water Board Approval Date:	December 14, 2010
Office of Administrative Law Approval Date:	April 4, 2011
U.S. EPA Approval Date:	June 22, 2011

3. TMDL Effective Date: April 4, 2011

4. Watershed Management Areas: See Table Below

5. Water Bodies: See Table Below

Table B-4: Applicability of Total Maximum Daily Loads for Indicator Bacteria Project I - Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)

Watershed Management Area and Watershed	Water Body	Segment or Area
South Orange County San Joaquin Hills HAS (901.11) and Laguna Beach HSA (901.12)	Pacific Ocean Shoreline	Cameo Cove at Irvine Cove Drive – Riviera Way
		at Heisler Park - North
		at Main Laguna Beach
		Laguna Beach at Ocean Avenue
		Laguna Beach at Cleo Street
		Arch Cove at Bluebird Canyon Road
		Laguna Beach at Dumond Drive
South Orange County Aliso HSA (901.13)	Pacific Ocean Shoreline	Laguna Beach at Lagunita Place / Blue Lagoon Place at Aliso Beach
	Aliso Creek	Entire reach (7.2 miles) and associated tributaries: - Aliso Hills Channel - English Canyon Creek - Dairy Fork Creek - Sulfur Creek - Wood Canyon Creek
	Aliso Creek Mouth	At mouth
South Orange	Pacific Ocean Shoreline	Aliso Beach at West Street

Watershed Management Area and Watershed	Water Body	Segment or Area
County Dana Point HSA (901.14)		Aliso Beach at Table Rock Drive
		100 Steps Beach at Pacific Coast Hwy at hospital (9th Avenue)
		at Salt Creek (large outlet)
		Salt Creek Beach at Salt Creek service road
		Salt Creek Beach at Strand Road
South Orange County Lower San Juan HSA (901.27)	Pacific Ocean Shoreline	at San Juan Creek
	San Juan Creek	lower 1 mile
	San Juan Creek Mouth	At mouth
South Orange County San Clemente HA (901.30)	Pacific Ocean Shoreline	At Poche Beach
		Ole Hanson Beach Club Beach at Pico Drain
		San Clemente City Beach at El Portal Street Stairs
		San Clemente City Beach at Mariposa Street
		San Clemente City Beach at Linda Lane
		San Clemente City Beach at South Linda Lane
		San Clemente City Beach at Lifeguard Headquarters
		Under San Clemente Municipal Pier
		San Clemente City Beach at Trafalgar Canyon (Trafalgar Lane)
		San Clemente State Beach at Riviera Beach
		Can Clemente State Beach at Cypress Shores
San Luis Rey River San Luis Rey HU (903.00)	Pacific Ocean Shoreline	at San Luis Rey River mouth
Carlsbad San Marcos HA (904.50)	Pacific Ocean Shoreline	at Moonlight State Beach
San Dieguito River San Dieguito HU (905.00)	Pacific Ocean Shoreline	at San Dieguito Lagoon mouth
Penasquitos Miramar Reservoir HA (906.10)	Pacific Ocean Shoreline	Torrey Pines State Beach at Del Mar (Anderson Canyon)
Mission Bay Scripps HA (906.30)	Pacific Ocean Shoreline	La Jolla Shores Beach at El Paseo Grande
		La Jolla Shores Beach at

Watershed Management Area and Watershed	Water Body	Segment or Area
		Caminito del Oro
		La Jolla Shores Beach at Vallecitos
		La Jolla Shores Beach at Avenida de la Playa
		at Casa Beach, Children's Pool
		South Casa Beach at Coast Boulevard
		Whispering Sands Beach at Ravina Street
		Windansea Beach at Vista de la Playa
		Windansea Beach at Bonair Street
		Windansea Beach at Playa del Norte
		Windansea Beach at Palomar Avenue
		at Tourmaline Surf Park
		Pacific Beach at Grand Avenue
Mission Bay Tecolote HA (906.50)	Tecolote Creek	Entire reach and tributaries
San Diego River Mission San Diego HSA (907.11) and Santee HSA (907.12)	Forrester Creek	lower 1 mile
	San Diego River	lower 6 miles
	Pacific Ocean Shoreline	at San Diego River mouth at Dog Beach
San Diego Bay Chollas HSA (908.22)	Chollas Creek	lower 1.2 miles

B. Final TMDL Compliance Requirements

Resolution No. R9-2010-0001 establishes WLAs and LAs for the discharge of indicator bacteria to twenty beaches and creeks in the San Diego Region. The TMDL identifies Phase I and Phase II MS4s, Caltrans, publically owned treatment works (and associated collection systems), and CAFOs. Section 7(h)(2)(A)(vi) of Attachment A to Resolution No. R9-2010-0001 states that unidentified point sources have not been assigned WLAs, which is equivalent to being assigned a WLA of zero, and that no discharge of bacteria are expected or allowed from unidentified point sources under the wet or dry weather TMDLs. Thus, discharges of indicator bacteria to the twenty beaches and creeks identified in the TMDL in groundwater extraction discharges are prohibited in section IV of this Order.

VII. Total Maximum Daily Load for Sedimentation in Los Penasquitos Lagoon

A. Applicability

1. TMDL Basin Plan Amendment: Resolution No. R9-2012-0033

2. TMDL Adoption and Approval Dates:

San Diego Water Board Adoption Date:	June 13, 2012
State Water Board Approval Date:	January 21, 2014
Office of Administrative Law Approval Date:	July 14, 2014
U.S. EPA Approval Date:	October 30, 2014

3. TMDL Effective Date: July14, 2014

4. Watershed Management Areas: Penasquitos

5. Water Bodies: Los Penasquitos Lagoon

B. Final TMDL Compliance Requirements

Resolution No. R9-2012-0033 establishes WLAs and LAs for the discharge of sediment to Los Penasquitos Lagoon. Resolution No. R9-2012-0033 does not establish an applicable WLA for the discharge of extracted groundwater, effectively resulting in a prohibition of sediment from extracted groundwater to Los Penasquitos Lagoon. For the purposes of this Order, the discharge of sediment to Los Penasquitos Lagoon is prohibited.

ATTACHMENT C – NOTICE OF INTENT (NOI)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

Notice of Intent Application Package for Coverage Under
Order No. R9-2015-0013
NPDES NO. CAG919003
General Waste Discharge Requirements for
Groundwater Extraction Discharges to
Surface Waters the San Diego Region

This application package constitutes a Notice of Intent (NOI) pursuant to secton II.A of Order No, R9-2015-0013. You must provide complete factual information on each item requested below including Form 200 (completed and signed in accordance with the form instructions) and additional sheets as necessary to provide the information requested. If you have any questions on the completion of any part of the NOI application, please contact the San Diego Water Board at 2375 Northside Drive, Suite 100, San Diego, CA 92108, Phone (619) 516-1990 · Fax (619) 516-1994.

I. STIPULATION OF APPLICABILITY AND CERTIFICATION

☐ I have determined that the extracted groundwater waste discharge will be to waters of the U.S. within the San Diego Region.
☐ I have determined that this discharge is eligible for enrollment in this General "Waste Discharge Requirements" (WDR) because the discharge will comply with the Discharge Specifications of this Order.

☐ I have reviewed Order No. R9-2015-0013 and hereby certify the following:

1. I understand the requirements of Order No. R9-2015-0013;

2. The enclosed information describing the proposed groundwater extraction waste discharge is accurate and describes a discharge that meets the requirements of Order No. R9-2015-0013;

3. I will comply with all terms, conditions, and requirements of Order No. R9-2015-0013.

I certify under penalty of law that this document, Form 200, including all attachments, and supplemental information were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those directly responsible for gathering the information, the information submitted is true, accurate, and complete to the best of my knowledge and belief. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. Signature:

I. STIPULATION OF APPLICABILITY AND CERTIFICATION	
B. Printed Name:	C. Date:
D. Title and Organization:	
E. Mailing Address including email	

II. ITEMS REQUIRED FOR DETERMINING ELIGIBILITY FOR DISCHARGE COVERAGE UNDER ORDER NO. 2015-0013. ***(Include the following information as stipulated in section II.A of Order No. R9-02015-0013 as Attachments to this form) Check the appropriate box below to designate each attachment included.***

☐ A. Treatment Facility Certification Report

☐ B. Disposal Alternative Analyis. An assessment of alternatives to discharging extracted groundwater waste and why it is technically or economically infeasible to implement these alternatives.

☐ C. MS4 Operator Notification. If discharging to an MS4, provide proof of notification to the appropriate municipality or owner of the MS4.

☐ D. An initial pollutant scan pursuant to Appendix C-1 of the NOI.

☐ E. Monitoring and Reporting Program (MRP). A sampling and monitoring program as specified section III.A of the MRP.

☐ F. Project Map. A scaled appropriate project map(s).

☐ G. A completed and signed Form 200 (*Application/Report of Waste Discharge, General Information for Waste Discharge Requirements or NPDES Permit*). This form can be accessed at http://www.waterboards.ca.gov/publications_forms/forms/

III. GROUNDWATER EXTRACTION INFORMATION

A. Check the appropriate box below to describe to the nature of Groundwater Extraction Activity:

1. ☐ Subsurface Activity

a.☐ Foundation b.☐ Tunneling c.☐ Construction d.☐ Footing

e.☐ Trench and Ditch e.☐ Tank removal

f.☐ Other _____

2. ☐ Remediation Project

3. ☐ Well Development

4. ☐ Other _____

B. Does this project require the applicant to apply for and obtain separate CWA section 401 certification, NPDES permit, waste discharge requirements?

1. ☐ No 2. ☐ Yes

If yes, please include a separate attachment providing details on what type of permit is required. (i.e. Construction storm water permit, CWA section 401 Certification, WDR, UST or cleanup project, etc.)

C. Designate the proposed discharge duration and discharge commencement date

1. Proposed Start Date of Groundwater Extraction Discharge: _____

2. Estimated Duration of Groundwater Extraction Discharge: _____

D. 1.☐ Describe in a separate attachment the historical use of the land within the cone/radius of influence for groundwater drawdown.

2.☐ Identify in a separate attachment all known contamination sites and groundwater contaminant plumes within one half mile of each proposed groundwater extraction point used in the project.

i. Attach a source of contamination description and a list of constituents characterizing the plume contaminants.

ii. Attach site assessment report(s) for each identified site or plume. (If available)

E. Discharge Location and Salinity of Receving Waters

Specify the location of the proposed discharge on the project map, check the appropriate box(es) below to describe the discharge location.

1. ☐ Storm Drain discharge to receving water,

2. ☐ Discharge directly into receiving water,

3. ☐ Characterize the salinity of the receiving water at the proposed groundwater extraction discharge point and provide supporting documentation in a separate attachment.

F. Pollutant Scan

2.☐ Please provide the results of the analysis of untreated groundwater to be extracted as specified in Appendix C-1 and Attachment E, section II.B of Order No. R9-2015-0013 for the proposed receiving water type.

IV. RECEIVING WATER INFORMATION (provide information on separate sheets if necessary)

A. Name receiving waterbody for each proposed discharge point: (e.g.San Diego River, Rainbow Creek, Pacific Ocean, etc.)

B. Describe the receiving water body type : (inland surface waters creek, river, bay, estuary, ocean, etc.)

Specify Hydrologic Subarea Number(s) for the point(s) of discharge to receiving waters. This information is contained in the San Diego Water Board's, *Water Quality Control Plan for the San Diego Basin* (Basin Plan) which can be accessed at http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

C. Is the extracted groundwater discharged directly to a municipal separate storm sewer system (MS4)? 1.☐ Yes 2.☐ No

2. If "Yes", provide the name of the owner or operator of the municipal separate storm sewer system (MS4)

D. Do receiving waters flow seasonally? 1.☐ Yes 2.☐ No

E. How many discharge points are proposed? _____

Distance between multiple discharge points _____

Include the following information on the Project Map or a separate map:
Location of each Discharge Point: Example: Outfall 001 (Latitude and Longitude)

F. Provide the proposed discharge flow volume in terms of millions of gallons perday (MGD) or gallons per day (gpd):

1. Maximum Daily Discharge Flowrate: _____

2. Average Daily Flowrate: _____

3. Basis for flowrate estimates (provide on additional sheets)

G. Total Maximum Daily Loads (TMDLs) applicable to each receving water body:

1. Are any of the receving water bodies listed on the current Clean Water Act secton 303(d) list for a constituent in the proposed groundwater extracton discharge(s)? (See http://www.waterboards.ca.gov/water_issues/programs/tmdl/ for current Clean Water Act section 303(d) listing)

☐ Yes ☐ No

If "Yes" list the receving water bodies specified on the Clean Water Act secton 303(d) list and the constituent(s) causing the impairment.

2.. Do the receving water body(ies) have applicable Total Maximum Daily Loads wasteload allocations at the point of discharge as described in Attachment B of Order No. R9-2015-0013?

☐ Yes ☐ No

If yes, list the pollutants subject to an applicable TMDL wasteload allocation:

V. APPLICATION FEE

Please provide the appropriate applicable fee. The initial fee and annual fee are based upon the type of pollutants to be discharged or potentially discharged. For the current fee schedule, please visit the State Water Board's fee website at: http://www.waterboards.ca.gov/resources/fees/ or contact the San Diego Water Board.

Please make check payable to "SWRCB" and include the Project name in the "memo" field.

☐ **Category 3 Lowest Threat to Water Quality**
The discharge will not require any treatment or require minimal treatment.

☐ **Category 2 Moderate Threat to Water Quality**
The discharge will be from a well that has a contaminated site within the radius of influence.

☐ **Category 1 Highest Threat to Water Quality**
The discharge will require treatment to meet effluent limitations.

Submit the NOI, first annual fee, map, and other attachments to the following address:

San Diego Water Board
2375 Northside Drive, Suite 100
San Diego, CA 92108

Attn: Groundwater Extraction
Source Control Regulation Unit
NOTICE OF INTENT

The San Diego Water Board is implementing a Paperless Office system to reduce paper use. Please convert all submissions with attachments to a searchable Portable Document Format (PDF) and submit the documents on a compact disk.

APPENDIX C-1 to
Notice of Intent Form for
Order NO. R9-2015-0013
NPDES NO. CAG919003
General National Pollutant Discharge Elimination System Permit for Groundwater Extraction Discharges to Waters of the United States Within the San Diego Region

REASONABLE POTENTIAL ANALYSIS PROCEDURE FOR DETERMINING WHICH WATER QUALITY OBJECTIVES OR CRITERIA REQUIRE EFFLUENT LIMITATIONS

To obtain coverage under this Order, the Discharger must complete a reasonable potential analysis (RPA) as set forth below and submit the applicable portions of this form as an attachment to the Notice of Intent (NOI).

In addition to minimum technology-based effluent limitations (TBELs), the Clean Water Act in section 301(b)(1)(C) requires that National Pollutant Discharge Elimination System (NPDES) permits include any more stringent effluent limitations necessary to achieve water quality standards[1]. Permit effluent limitations implementing water quality standards are called water quality-based effluent limitations (WQBELs). NPDES permits must limit and control all pollutants that are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard including narrative criteria". The analysis that is performed to determine what pollutants require WQBELs is commonly referred to as the reasonable potential analysis.

The purpose of the following procedure is to provide direction to the Discharger for determining if a pollutant in the proposed groundwater extraction discharge causes, has the reasonable potential to cause, or contributes to an excursion above any applicable State water quality objective or federal water quality criteria in accordance with 40 CFR section 122.44 (d)(1)(iii). The Discharger will be required to comply with WQBELs for all pollutants identified as having "reasonable potential" under the terms and conditions of this Order.

Step 1 Identify Pollutants in the Groundwater

The Discharger must obtain and analyze (using appropriate sampling and laboratory methods) a representative sample(s) of the untreated groundwater that is proposed for extraction, potentially treated, and discharged under this Order.

The Discharger shall sample the groundwater for the pollutants identified in the applicable tables below in sections A, B, C, and D of this Attachment. These Tables are organized based on the receiving water type and the beneficial uses designated for the receiving water in Chapter II of the *Water Quality Control Plan For The San Diego Basin (2011)* (Basin Plan). The Basin Plan can be accessed at:

http://www.swrcb.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

If the receiving water and the applicable beneficial uses are not identified in the Basin Plan, the applicable beneficial uses shall be the beneficial uses designated for the first downstream water body for which the receiving water is a tributary. Please contact the San Diego Water Board if assistance is needed for identifying applicable beneficial uses of the receving water.

[1] Water quality standards, as defined in Clean Water Act (CWA) section 303(c), consist of the beneficial uses of a water body and criteria (referred to as water quality objectives in California) to protect those uses and an antidegradation policy.

The Discharger shall determine the observed maximum pollutant concentrations in the groundwater based on the sample results. The analytical method(s) used must be capable of achieving a detection limit at or below the minimum levels as defined in Attachment A.2 of this Order; otherwise, a written explanation must be provided. For data reported as non-detect, or detected but not quantified (DNQ), please refer to the Ocean Plan for discharges to the Ocean or the SIP for all other discharges, regarding rules for including such data.

Step 2. Determine Total Hardness of the Freshwater Receiving Water if Discharge to Freshwater Inland Surface Waters is Proposed

Certain water quality objectives/criteria for freshwater inland receiving water bodies are hardness dependent and therefore must be adjusted for hardness levels in the receiving waters. If a discharge of extracted groundwater to freshwater inland surface receiving waters is proposed, the Discharger must obtain and analyze a representative sample(s) of the upstream receiving water for total hardness expressed as mg/L of calcium carbonate ($CaCO_3$). If multiple samples are taken, then the lowest value for total hardness must be used for determining reasonable potential.

If a representative sample cannot be obtained upstream of the proposed discharge location, the Discharger shall obtain the sample no more than 100 feet downstream of the proposed discharge location. Samples greater than 100 feet but less than 600 feet downstream may be obtained provided another discharge or site is not impacting hardness within the receiving water. If the receiving water is comprised entirely of effluent, the Discharger may analyze the effluent for hardness in lieu of the receiving water.

Step 3. Conduct the Reasonable Potential Analysis (RPA) to Determine if a Water Quality-Based Effluent Limitation (WQBEL) is Required

The Discharger shall conduct the RPA as specified in section II of the MRP in Attachment E of this Order and report the results for each constituent in the “Sample Result” column of the applicable table below in sections A, B, C, and D of this Attachment. The Discharger shall then compare the sample result for the constituent to the corresponding water quality objective/criteria trigger value for that constituent. If the sample result is greater than the trigger value, the Discharger shall indicate reasonable potential exists by entering “yes” into the “Reasonable Potential?” column. If the sample result is equal to or less than the applicable trigger value, the Discharger shall indicate reasonable potential does not exist by entering “no” into the “Reasonable Potential?” column.

The Discharger shall also identify if the proposed discharge is at a location subject to a Total Maximum Daily Load (TMDL) as described in Attachment B of this Order. If a discharge into a receiving water reach subject to a TMDL is proposed, the Discharger shall indicate presumptive reasonable potential exists by entering “presumptive-yes” into the “Reasonable Potential?” column for the pollutant subject to a TMDL.

As explained in more detail in the Fact Sheet, Attachment F of this Order, groundwater extraction discharges are considered to presumptively have reasonable potential for grease and oil, total suspended soilds, settleable solids, turbidity, and pH which are subject to TBELs. In addition, groundwater extraction discharges are considered to presumptively have a reasonable potential for chronic toxicity due to the uncertainty of toxic effects resulting from limited monitoring data, the potential for the presence of a variety of pollutants from groundwater contamination sites and plumes in close proximity proximity to the groundwater extraction site and the potential for toxic synergistic reactions of pollutants the extracted groundwater discharge.

Table A: Parameters with Presumptive Reasonable Potential for all Discharges

Parameter	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Grease and Oil	mg/L		Automatic	Presumptive - yes
Total Suspended Solids	mg/L		Automatic	Presumptive - yes
Settleable Solids	mL/L		Automatic	Presumptive - yes
Turbidity	NTU		Automatic	Presumptive - yes
Chronic Toxicity	TUc		Automatic	Presumptive - yes
pH	s.u.		Automatic	Presumptive - yes

Effluent limitation and monitoring requirements for the parameters in Table A are required regardless of the groundwater sample analysis results.

The San Diego Water Board reserves the right to re-evaluate the Discharger's RPA to incorporate additional representative data or relevant information, pursuant to the specifications in section 1.1 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) and the *Water Quality Control Plan for Ocean Waters of California, California Ocean Plan* (Ocean Plan).

The certification statement and statement of perjury on the NOI form are applicable to all attachments of the NOI, and are applicable to the results of the RPA reported in the tables set forth below.

A. Reasonable Potential Analysis (RPA) – Freshwater Inland Surface Waters

Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 parts per thousand and above and at locations where this occurs 95% of the time. Where receiving water salinities are between 1 and 10 parts per thousand the more stringent of freshwater or saltwater criteria applies. If a Discharger is not certain of the salinity for the receiving water at the point of discharge, then a salinity sample of the receiving water must be taken and reported to the San Diego Water Board, to provide data determining the appropriate water quality criteria to apply.

1. All Inland Freshwater Surface Waters.

a. For proposed discharges to inland freshwater surface waters, the Discharger shall provide effluent sample results for the parameters specified in the table below. The Discharger shall compare the sample result to the applicable water quality objective/criteria trigger value criteria as adjusted by the receiving water total hardness. If the sample result is greater than or equal to the applicable trigger value criteria, the Discharger shall indicate reasonable potential exists for that parameter by putting "yes" in the Reasonable Potential column. If the sample result is less than the applicable trigger value criteria, the Discharger may indicate reasonable potential does not exist for that parameter by putting "no" in the Reasonable Potential column.

The Discharger shall provide the upstream hardness concentration of the receiving water in the space below. If there is no flow upstream of the discharge point, the Discharger shall provide the value for effluent hardness concentration in the space below:

Total Hardness Value: _____

Table B: RPA for Discharges to Freshwater Inland Surface Waters

Parameter[1]	Units	Sample Result	Water Quality Objective/Criteria Trigger Value[3]			Reasonable Potential? (yes/no)
			Receiving Water Total Hardness (mg/L)			
			Less than 200?	Within the range of 200 – 300?	Greater than 300?	
Cadmium	µg/L		4.3	5.8	7.3	
Copper[2]	µg/L		16.9	23.9	30.5	
Lead[2]	µg/L		7.7	12.9	18.6	
Nickel	µg/L		94	132	169	
Silver	µg/L		13.4	26.9	44.1	
Zinc[2]	µg/L		216	304	388	

[1] All metals are expressed as total recoverable.
[2] Discharges to Chollas Creek have automatic reasonable potential for copper, lead, and zinc.
[3] Source of Water Quality Objectives/Criteria is described in Attachment F, Fact Sheet.

b. Chollas Creek is listed on the Clean Water Act section 303(d) list as impaired for copper, lead, and zinc. Accordingly groundwater extraction discharges to Chollas Creek are presumptively classified as having reasonable potential for copper, lead, and zinc.

Is the extracted groundwater proposed for discharge to Chollas Creek?
1.☐ Yes 2.☐ No

c. Freshwater Receiving Waters Designated MUN. For proposed discharges to freshwater receiving waters with a designated domestic and municipal supply (MUN) beneficial use, the Discharger shall provide groundwater sample results for the parameters specified in the table below.

Is the extracted groundwater proposed for discharge to a freshwater receiving waters with a designated MUN beneficial use?

1.☐ Yes 2.☐ No

If yes, continue with the RPA in this section. If no, use the RPA in section A.2 of this attachment, for freshwater receiving waters, including Buena Vista Lagoon, not designated MUN.

Receiving Waters designated as having a municipal and domestic supply (MUN) beneficial use are identified in Tables 2-2 through 2-4 in Chapter II of the Water Quality Control Plan For The San Diego Basin (2011) (Basin Plan). The Basin Plan can be accessed at:

http://www.swrcb.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml

The Discharger shall compare the sample result to the applicable water quality objective/criteria trigger value. If the sample result is greater than or equal to the applicable trigger value criteria, the Discharger shall indicate reasonable potential exists for that parameter by putting "yes" in the Reasonable Potential column. If the sample result is less than the applicable trigger value criteria, the Discharger may indicate reasonable potential does not exist for that parameter by putting "no" in the Reasonable Potential column.

Table C: RPA for Discharges to Freshwater Receiving Waters Designated MUN

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Hydrogen Sulfide	µg/L		2.0	
Xylene	µg/L		5.0	
Chlorinated Phenolics	µg/L		1.0	
Remaining Base/Neutral Compounds[1]	µg/L		10	
Total Petroleum Hydrocarbons	mg/L		0.5	
Percent Sodium	%		60	
Total Nitrogen	mg/L		1.0	
Total Phosphorus	mg/L		0.1	
Methylene Blue Active Substances (MBAS)	mg/L		0.5	
Fluoride	mg/L		1.0	
Total Residual Chlorine[2]	µg/L		2.0	
Dissolved Oxygen	mg/L		5.0/6.0[3]	
Iron, Total Recoverable	mg/L		0.3	
Manganese, Total Recoverable	mg/L		0.05	
Total Coliform[4]	MPN/100 mL		1,000	
Fecal Coliform[4]	MPN/100 mL		200	
Dibromochloropropane	µg/L		0.2	
Ethylene Dibromide	µg/L		0.02	
Methyl-Tert-Butyl Ether (MTBE)	µg/L		5.0	
Antimony, Total Recoverable	ug/L		14	
Arsenic, Total Recoverable	ug/L		150	
Chromium (III) , Total Recoverable	ug/L		640	
Chromium (VI) , Total Recoverable	ug/L		11	
Mercury, Total Recoverable	ug/L		0.05	
Selenium, Total Recoverable	ug/L		5.0	
Thallium, Total Recoverable	ug/L		1.7	
Cyanide, Total	ug/L		5.2	

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
2,3,7,8 TCDD	ug/L		1.3E-08	
TCDD Equivalents[5]	ug/L		1.3E-08	
Acrolein	ug/L		320	
Acrylonitrile	ug/L		0.06	
Benzene	ug/L		0.56	
Bromoform	ug/L		4.3	
Carbon Tetrachloride	ug/L		0.25	
Chlorobenzene	ug/L		680	
Chlorodibromomethane	ug/L		0.40	
Dichlorobromomethane	ug/L		0.56	
1,2-Dichloroethane	ug/L		0.38	
1,1-Dichloroethylene	ug/L		0.1	
1,2-Dichloropropane	ug/L		0.52	
1,3-Dichloropropylene	ug/L		10	
Ethylbenzene	ug/L		3,100	
Methyl Bromide	ug/L		48	
Methylene Chloride	ug/L		4.7	
1,1,2,2-Tetrachloroethane	ug/L		0.17	
Tetrachloroethylene	ug/L		0.8	
Toluene	ug/L		6,800	
1,2-Trans-Dichloroethylene	ug/L		700	
1,1,2-Trichloroethane	ug/L		0.60	
Trichloroethylene	ug/L		2.7	
Vinyl Chloride	ug/L		2.0	
2-Chlorophenol	ug/L		120	
2,4-Dichlorophenol	ug/L		93	
2,4-Dimethylphenol	ug/L		540	
4,6-dinitro-o-resol	ug/L		13	
2,4-Dinitrophenol	ug/L		70	
Pentachlorophenol	ug/L		0.28	
Phenol	ug/L		21,000	
2,4,6-Trichlorophenol	ug/L		2.1	
Acenaphthene	ug/L		1,200	
Anthracene	ug/L		9,600	
Benzidine	ug/L		0.00012	
Benzo(a)Anthracene	ug/L		0.0044	
Benzo(a)Pyrene	ug/L		0.0044	
Benzo(b)Fluoranthene	ug/L		0.0044	
Benzo(k)Fluoranthene	ug/L		0.0044	
Bis(2-Chloroethyl)Ether	ug/L		0.031	
Bis(2-Chloroisopropyl)Ether	ug/L		1,400	
Bis(2-Ethylhexyl)Phthalate	ug/L		1.8	
Butylbenzyl Phthalate	ug/L		3,000	
2-Chloronaphthalene	ug/L		1,700	
Chrysene	ug/L		0.0044	
Dibenzo(a,h)Anthracene	ug/L		0.0044	
1,2-Dichlorobenzene	ug/L		2,700	
1,3-Dichlorobenzene	ug/L		400	
1,4-Dichlorobenzene	ug/L		400	
3,3 Dichlorobenzidine	ug/L		0.04	

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Diethyl Phthalate	ug/L		23,000	
Dimethyl Phthalate	ug/L		310,000	
Di-n-Butyl Phthalate	ug/L		2,700	
2,4-Dinitrotoluene	ug/L		0.11	
1,2-Diphenylhydrazine	ug/L		0.04	
Fluoranthene	ug/L		300	
Fluorene	ug/L		1,300	
Hexachlorobenzene	ug/L		0.00075	
Hexachlorobutadiene	ug/L		0.44	
Hexachlorocyclopentadiene	ug/L		240	
Hexachloroethane	ug/L		1.9	
Indeno(1,2,3-cd)Pyrene	ug/L		0.0044	
Isophorone	ug/L		8.4	
Nitrobenzene	ug/L		17	
N-Nitrosodimethylamine	ug/L		0.0007	
N-Nitrosodi-n-Propylamine	ug/L		0.005	
N-Nitrosodiphenylamine	ug/L		5.0	
Pyrene	ug/L		960	
Aldrin	ug/L		0.00013	
alpha-BHC	ug/L		0.0039	
beta-BHC	ug/L		0.014	
gamma-BHC	ug/L		0.019	
Chlordane[6]	ug/L		0.00057	
4,4'-DDT	ug/L		0.00059	
4,4'-DDE	ug/L		0.00059	
4,4'-DDD	ug/L		0.00083	
Dieldrin	ug/L		0.00014	
alpha-Endosulfan	ug/L		0.056	
beta-Endosulfan	ug/L		0.056	
Endosulfan Sulfate	ug/L		110	
Endrin	ug/L		0.036	
Endrin Aldehyde	ug/L		0.76	
Heptachlor	ug/L		0.00021	
Heptachlor Epoxide	ug/L		0.00010	
PCBs sum[7]	ug/L		0.00017	
Toxaphene	ug/L		0.0002	

[1] As defined using Method 6410.

[2] Reasonable potential for total residual chlorine shall be “Presumptive-yes”, regardless of effluent sample results if the effluent is disinfected or otherwise chlorinated prior to discharge.

[3] Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 in waters with cold fresh-water habitat beneficial use.

[4] Monitoring for total coliform, fecal coliform and enterococcus is only required if the groundwater extraction activity is associated with sewage collection or treatment.

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

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01

Isomer Group	Toxicity Equivalence Factor
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

[6] Chordane shall mean the sum ofchlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[7] PCBs sum shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of acoclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

2. Freshwater Receiving Waters, including Buena Vista Lagoon, Not Designated MUN.

For discharges to freshwater receiving waters without the designated domestic and municipal supply (MUN) beneficial use, the Discharger shall provide groundwater sample results for the parameters specified in the table below. The Discharger shall compare the sample result to the applicable water quality objective/criteria trigger value. If the sample result is greater than or equal to the applicable trigger value, the Discharger shall indicate reasonable potential exists for that parameter by putting “yes” in the “Reasonable Potential?” column. If the sample result is less than the applicable trigger value criteria, the Discharger may indicate reasonable potential does not exist for that parameter by putting “no” in the Reasonable Potential column.

Table D: RPA for Discharges to Freshwater Receiving Waters, including Buena Vista Lagoon, that are Not Designated MUN

Parameter	Unit	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Hydrogen Sulfide	µg/L		2.0	
Xylene	µg/L		5.0	
Chlorinated Phenolics	µg/L		10	
Remaining Base/Neutral Compounds[1]	µg/L		10	
Total Petroleum Hydrocarbons	mg/L		0.5	
Percent Sodium	%		60	
Total Nitrogen	mg/L		1.0	
Total Phosphorus	mg/L		0.1	
Methylene Blue Active Substances (MBAS)	mg/L		0.5	
Fluoride	mg/L		1.0	
Total Residual Chlorine[2]	µg/L		2.0	
Dissolved Oxygen	mg/L		5.0/6.0[3]	
Iron, Total Recoverable	mg/L		0.3	
Manganese, Total Recoverable	mg/L		0.05	
Total Coliform[4]	MPN/100 mL		1,000	
Fecal Coliform[4]	MPN/100 mL		200	
Dibromochloropropane	µg/L		0.2	
Ethylene Dibromide	µg/L		0.02	
Antimony, Total Recoverable	ug/L		4,300	
Arsenic, Total Recoverable	ug/L		150	
Chromium (III) , Total Recoverable	ug/L		410	

Parameter	Unit	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Chromium (VI) , Total Recoverable	ug/L		11	
Mercury, Total Recoverable	ug/L		0.051	
Selenium, Total Recoverable	ug/L		5.0	
Thallium, Total Recoverable	ug/L		6.3	
Cyanide, Total	ug/L		5.2	
2,3,7,8 TCDD	ug/L		1.40E-08	
TCDD Equivalents[6]	ug/L		1.40E-08	
Acrolein	ug/L		780	
Acrylonitrile	ug/L		0.66	
Benzene	ug/L		71	
Bromoform	ug/L		360	
Carbon Tetrachloride	ug/L		4.4	
Chlorobenzene	ug/L		21,000	
Chlorodibromomethane	ug/L		34	
Dichlorobromomethane	ug/L		46	
1,2-Dichloroethane	ug/L		99	
1,1-Dichloroethylene	ug/L		3.2	
1,2-Dichloropropane	ug/L		39	
1,3-Dichloropropylene	ug/L		1,700	
Ethylbenzene	ug/L		29,000	
Methyl Bromide	ug/L		4,000	
Methylene Chloride	ug/L		1,600	
1,1,2,2-Tetrachloroethane	ug/L		11	
Tetrachloroethylene	ug/L		8.9	
Toluene	ug/L		200,000	
1,2-Trans-Dichloroethylene	ug/L		140,000	
1,1,2-Trichloroethane	ug/L		42	
Trichloroethylene	ug/L		81	
Vinyl Chloride	ug/L		530	
2-Chlorophenol	ug/L		400	
2,4-Dichlorophenol	ug/L		790	
2,4-Dimethylphenol	ug/L		2,300	
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		765	
2,4-Dinitrophenol	ug/L		14,000	
Pentachlorophenol	ug/L		6.7	
Phenol	ug/L		4,600,000	
2,4,6-Trichlorophenol	ug/L		6.5	
Acenaphthene	ug/L		2,700	
Anthracene	ug/L		110,000	
Benzidine	ug/L		0.00054	
Benzo(a)Anthracene	ug/L		0.049	
Benzo(a)Pyrene	ug/L		0.049	
Benzo(b)Fluoranthene	ug/L		0.049	
Benzo(k)Fluoranthene	ug/L		0.049	
Bis(2-Chloroethyl)Ether	ug/L		1.4	

Parameter	Unit	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Bis(2-Chloroisopropyl)Ether	ug/L		170,000	
Bis(2-Ethylhexyl)Phthalate	ug/L		5.9	
Butylbenzyl Phthalate	ug/L		5,200	
2-Chloronaphthalene	ug/L		4,300	
Chrysene	ug/L		0.049	
Dibenzo(a,h)Anthracene	ug/L		0.049	
1,2-Dichlorobenzene	ug/L		17,000	
1,3-Dichlorobenzene	ug/L		2,600	
1,4-Dichlorobenzene	ug/L		2,600	
3,3 Dichlorobenzidine	ug/L		0.08	
Diethyl Phthalate	ug/L		120,000	
Dimethyl Phthalate	ug/L		2,900,000	
Di-n-Butyl Phthalate	ug/L		12,000	
2,4-Dinitrotoluene	ug/L		9.1	
1,2-Diphenylhydrazine	ug/L		0.54	
Fluoranthene	ug/L		370	
Fluorene	ug/L		14,000	
Hexachlorobenzene	ug/L		0.00077	
Hexachlorobutadiene	ug/L		50	
Hexachlorocyclopentadiene	ug/L		17,000	
Hexachloroethane	ug/L		8.9	
Indeno(1,2,3-cd)Pyrene	ug/L		0.049	
Isophorone	ug/L		600	
Nitrobenzene	ug/L		1,900	
N-Nitrosodimethylamine	ug/L		8.1	
N-Nitrosodi-n-Propylamine	ug/L		1.4	
Pyrene	ug/L		11,000	
Aldrin	ug/L		0.00014	
alpha-BHC	ug/L		0.013	
beta-BHC	ug/L		0.046	
gamma-BHC	ug/L		0.063	
Chlordane[7]	ug/L		0.00059	
4,4'-DDT	ug/L		0.00059	
4,4'-DDE (linked to DDT)	ug/L		0.00059	
4,4'-DDD	ug/L		0.00084	
Dieldrin	ug/L		0.00014	
alpha-Endosulfan	ug/L		0.056	
beta-Endosulfan	ug/L		0.056	
Endosulfan Sulfate	ug/L		240	
Endrin	ug/L		0.036	
Endrin Aldehyde	ug/L		0.81	
Heptachlor	ug/L		0.0002	
Heptachlor Epoxide	ug/L		0.00011	
PCBs sum[8]	ug/L		0.00017	
Toxaphene	ug/L		0.0002	

[1] As defined using Method 6410.

[2] Reasonable potential for total residual chorine shall be “Presumptive yes”, regardless of effluent sample results if the effluent is disinfected or otherwise chlorinated prior to discharge.

[3] Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 in waters with cold fresh-water habitat beneficial use.

[4] Monitoring for total coliform, fecal coliform, and enterococcus is only required if the groundwater extraction activity is associated with sewage collection or treatment.

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

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

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

[8] PCBs sum shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-12342, aroclor-1248, aroclor-1254, and aroclor-1260.

B. Reasonable Potential Analysis (RPA) – Saltwater Inland Surface Waters, Not Including Bays and Estuaries

Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 parts per thousand and above and at locations where this occurs 95% of the time. Where receiving water salinities are between 1 and 10 parts per thousand the more stringent of freshwater or saltwater criteria applies. If a Discharger is not certain of the salinity for the receiving water at the point of discharge, then a sample of the receiving water must be taken, analyzed for salinity, and reported to the San Diego Water Board with the NOI. This information is needed determine the appropriate water quality criteria to apply. When a receiving water sample is unable to be taken, then the salinity of the groundwater may be used in lieu of the receiving water salinity.

1. For discharges to saltwater inland surface receiving waters, not including bays and estuaries, the Discharger shall provide groundwater sample results for the parameters specified in the table below. The Discharger shall compare the sample result to the applicable water quality objective/criteria trigger value. If the sample result is greater than or equal to the applicable trigger value, the Discharger shall indicate reasonable potential exists for that parameter by putting “yes” in the Reasonable Potential column. If the sample result is less than the applicable trigger value, the Discharger may indicate reasonable potential does not exist for that parameter by putting “no” in the Reasonable Potential column.

Table E: RPA for Discharges to Marine Surface Waters, Not Including Bays and Estuaries

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Hydrogen Sulfide	µg/L		2.0	
Xylene	µg/L		5.0	
Chlorinated Phenolics	µg/L		1.0	
Remaining Base/Neutral Compounds[1]	µg/L		10	
Total Petroleum Hydrocarbons	mg/L		0.5	
Percent Sodium	%		60	
Total Nitrogen	mg/L		1.0	
Total Phosphorus	mg/L		0.1	
Methylene Blue Active Substances (MBAS)	mg/L		0.5	
Fluoride	mg/L		1.0	
Total Residual Chlorine[2]	µg/L		2.0	
Dissolved Oxygen	mg/L		5.0/6.0[3]	
Iron, Total Recoverable	mg/L		0.3	
Manganese, Total Recoverable	mg/L		0.05	
Total Coliform[4]	MPN/100 mL		1,000	
Fecal Coliform[4]	MPN/100 mL		200	
Dibromochloropropane	µg/L		0.2	
Ethylene Dibromide	µg/L		0.02	
Antimony, Total Recoverable	ug/L		4,300	
Arsenic, Total Recoverable	ug/L		36	
Cadmium, Total Recoverable	ug/L		9.4	
Chromium (VI) , Total Recoverable	ug/L		50	
Copper, Total Recoverable	ug/L		3.7	
Lead, Total Recoverable	ug/L		8.5	
Mercury, Total Recoverable	ug/L		0.051	
Nickel, Total Recoverable	ug/L		8.3	
Selenium, Total Recoverable	ug/L		71	
Silver, Total Recoverable	ug/L		2.2	
Thallium, Total Recoverable	ug/L		6.3	
Zinc, Total Recoverable	ug/L		86	
Cyanide, Total	ug/L		1.0	
2,3,7,8 TCDD	ug/L		1.4E-08	
TCDD Equivalents[5]	ug/L		1.4E-08	
Acrolein	ug/L		780	
Acrylonitrile	ug/L		0.66	
Benzene	ug/L		71	
Bromoform	ug/L		360	
Carbon Tetrachloride	ug/L		4.4	
Chlorobenzene	ug/L		21,000	
Chlorodibromomethane	ug/L		34	
Dichlorobromomethane	ug/L		46	
1,2-Dichloroethane	ug/L		99	
1,1-Dichloroethylene	ug/L		3.2	
1,2-Dichloropropane	ug/L		39	
1,3-Dichloropropylene	ug/L		1,700	
Ethylbenzene	ug/L		29,000	

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Methyl Bromide	ug/L		4,000	
Methylene Chloride	ug/L		1,600	
1,1,2,2-Tetrachloroethane	ug/L		11	
Tetrachloroethylene	ug/L		8.9	
Toluene	ug/L		200,000	
1,2-Trans-Dichloroethylene	ug/L		140,000	
1,1,2-Trichloroethane	ug/L		42	
Trichloroethylene	ug/L		81	
Vinyl Chloride	ug/L		530	
2-Chlorophenol	ug/L		400	
2,4-Dichlorophenol	ug/L		790	
2,4-Dimethylphenol	ug/L		2,300	
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		770	
2,4-Dinitrophenol	ug/L		14,000	
Pentachlorophenol	ug/L		7.9	
Phenol	ug/L		4,600,000	
2,4,6-Trichlorophenol	ug/L		6.5	
Acenaphthene	ug/L		2,700	
Anthracene	ug/L		110,000	
Benzidine	ug/L		0.00054	
Benzo(a)Anthracene	ug/L		0.049	
Benzo(a)Pyrene	ug/L		0.049	
Benzo(b)Fluoranthene	ug/L		0.049	
Benzo(k)Fluoranthene	ug/L		0.049	
Bis(2-Chloroethyl)Ether	ug/L		1.4	
Bis(2-Chloroisopropyl)Ether	ug/L		170,000	
Bis(2-Ethylhexyl)Phthalate	ug/L		5.9	
Butylbenzyl Phthalate	ug/L		5,200	
2-Chloronaphthalene	ug/L		4,300	
Chrysene	ug/L		0.049	
Dibenzo(a,h)Anthracene	ug/L		0.049	
1,2-Dichlorobenzene	ug/L		17,000	
1,3-Dichlorobenzene	ug/L		2,600	
1,4-Dichlorobenzene	ug/L		2,600	
3,3 Dichlorobenzidine	ug/L		0.077	
Diethyl Phthalate	ug/L		120,000	
Dimethyl Phthalate	ug/L		2,900,000	
Di-n-Butyl Phthalate	ug/L		12,000	
2,4-Dinitrotoluene	ug/L		9.1	
1,2-Diphenylhydrazine	ug/L		0.54	
Fluoranthene	ug/L		370	
Fluorene	ug/L		14,000	
Hexachlorobenzene	ug/L		0.00077	
Hexachlorobutadiene	ug/L		50	
Hexachlorocyclopentadiene	ug/L		17,000	
Hexachloroethane	ug/L		8.9	
Indeno(1,2,3-cd)Pyrene	ug/L		0.049	
Isophorone	ug/L		600	
Nitrobenzene	ug/L		1,900	

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
N-Nitrosodimethylamine	ug/L		8.1	
N-Nitrosodi-n-Propylamine	ug/L		1.4	
N-Nitrosodiphenylamine	ug/L		16	
Pyrene	ug/L		11,000	
Aldrin	ug/L		0.00014	
alpha-BHC	ug/L		0.013	
beta-BHC	ug/L		0.046	
gamma-BHC	ug/L		0.063	
Chlordane[6]	ug/L		0.00059	
4,4'-DDT	ug/L		0.00059	
4,4'-DDE (linked to DDT)	ug/L		0.00059	
4,4'-DDD	ug/L		0.00084	
Dieldrin	ug/L		0.00014	
alpha-Endosulfan	ug/L		0.0087	
beta-Endosulfan	ug/L		0.0087	
Endosulfan Sulfate	ug/L		240	
Endrin	ug/L		0.0023	
Endrin Aldehyde	ug/L		0.81	
Heptachlor	ug/L		0.00021	
Heptachlor Epoxide	ug/L		0.00011	
PCBs sum[7]	ug/L		0.00017	
Toxaphene	ug/L		0.0002	

[1] As defined using Method 6410.

[2] Reasonable potential for total residual chorine shall be “Presumptive-yes”, regardless of effluent sample results if the effluent is disinfected or otherwise chlorinated prior to discharge.

[3] Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 in waters with cold fresh-water habitat beneficial use.

[4] Monitoring for total coliform, fecal coliform and enterococcus is only required if the groundwater extraction activity is associated with sewage collection or treatment.

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

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

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

[7] PCBs sum shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-12342, aroclor-1248, aroclor-1254, and aroclor-1260.

C. Reasonable Potential Analysis (RPA) - Bays and Estuaries, not including Buena Vista Lagoon

1. For discharges to bays and estuaries, not including Buena Vista Lagoon, the Discharger shall provide groundwater sample results for the parameters specified in the table below. The Discharger shall compare the sample result to the applicable water quality objective/criteria trigger value. If the sample result is greater than or equal to the applicable trigger value, the Discharger shall indicate reasonable potential exists for that parameter by putting "yes" in the Reasonable Potential column. If the sample result is less than the applicable trigger value, the Discharger may indicate reasonable potential does not exist for that parameter by putting "no" in the Reasonable Potential column.

Table F: RPA for Discharges to Bays and Estuaries, not including Buena Vista Lagoon

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Hydrogen Sulfide	µg/L		2.0	
Xylene	µg/L		5.0	
Chlorinated Phenolics	µg/L		1.0	
Base/Neutral Compounds[1]	µg/L		10	
Total Petroleum Hydrocarbons	µg/L		500	
Total Residual Chlorine[2]	µg/L		8.0	
Ammonia, Total	µg/L		600	
Total Nitrogen[3]	mg/L		1.0	
Total Phosphorus[3]	mg/L		0.1	
Dissolved Oxygen	mg/L		5.0[4]	
Total Coliform[5]	MPN/100ml		1,000	
Fecal Coliform[5]	MPN/100ml		200	
Enterococcus[5]	MPN/100ml		35	
Methyl-tert-butyl Ether	µg/L		5.0	
Antimony, Total Recoverable	ug/L		4,300	
Arsenic, Total Recoverable	ug/L		36	
Cadmium , Total Recoverable	ug/L		9.4	
Chromium (VI), Total Recoverable	ug/L		50	
Copper, Total Recoverable	ug/L		3.7	
Lead, Total Recoverable	ug/L		8.5	
Mercury, Total Recoverable	ug/L		0.051	
Nickel, Total Recoverable	ug/L		8.3	
Selenium, Total Recoverable	ug/L		71	
Silver, Total Recoverable	ug/L		2.2	
Thallium, Total Recoverable	ug/L		6.3	
Tributyltin	µg/L		0.0014	
Zinc, Total Recoverable	ug/L		86	
Cyanide, total	ug/L		1.0	
TCDD Equivalents[6]	ug/L		3.90E-09	
Acrolein	ug/L		780	
Acrylonitrile	ug/L		0.66	
Benzene	ug/L		5.0	
Carbon Tetrachloride	ug/L		0.9	
Chlorobenzene	ug/L		21,000	
Chlorodibromomethane	ug/L		34	
Dichlorobromomethane	ug/L		46	

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Dichloromethane	µg/L		5.0	
1,2-Dichloroethane	ug/L		28	
1,1-Dichloroethylene	ug/L		3.2	
1,2-Dichloropropane	ug/L		39	
1,3-Dichloropropylene	ug/L		1,700	
Ethylbenzene	ug/L		50	
Phenolic Compounds (non-chlorinated)	µg/L		30	
1,1,2,2-Tetrachloroethane	ug/L		2.3	
Tetrachloroethylene	ug/L		2.0	
Toluene	ug/L		5.0	
1,2-Trans-Dichloroethylene	ug/L		140,000	
1,1,1-trichloroethane	µg/L		540,000	
1,1,2-Trichloroethane	ug/L		9.4	
Trichloroethylene	ug/L		27	
Vinyl Chloride	ug/L		36	
Chlorophenol	ug/L		400	
2,4-Dichlorophenol	ug/L		790	
2,4-Dimethylphenol	ug/L		2,300	
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L		770	
2,4-Dinitrophenol	ug/L		14,000	
Pentachlorophenol	ug/L		7.9	
Phenol	ug/L		4,600,000	
2,4,6-Trichlorophenol	ug/L		6.5	
Acenaphthene	ug/L		2,700	
Anthracene	ug/L		110,000	
Benzidine	ug/L		0.00054	
Benzo(a)Anthracene	ug/L		0.049	
Benzo(a)Pyrene	ug/L		0.049	
Benzo(b)Fluoranthene	ug/L		0.049	
Benzo(k)Fluoranthene	ug/L		0.049	
Bis(2-Chloroethyl)Ether	ug/L		1.4	
Bis(2-Chloroisopropyl)Ether	ug/L		170,000	
Bis(2-Ethylhexyl)Phthalate	ug/L		5.9	
Butylbenzyl Phthalate	ug/L		5,200	
2-Chloronaphthalene	ug/L		4,300	
Chrysene	ug/L		0.049	
Dibenzo(a,h)Anthracene	ug/L		0.049	
1,2-Dichlorobenzene	ug/L		17,000	
1,3-Dichlorobenzene	ug/L		2,600	
1,4-Dichlorobenzene	ug/L		2,600	
3,3 Dichlorobenzidine	ug/L		0.077	
Diethyl Phthalate	ug/L		120,000	
Dimethyl Phthalate	ug/L		2,900,000	
Di-n-Butyl Phthalate	ug/L		12,000	
2,4-Dinitrotoluene	ug/L		9.1	

Parameters	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
1,2-Diphenylhydrazine	ug/L		0.51	
Fluoranthene	ug/L		370	
Fluorene	ug/L		14,000	
Hexachlorobenzene	ug/L		0.00077	
Hexachlorobutadiene	ug/L		50	
Hexachlorocyclopentadiene	ug/L		17,000	
Hexachloroethane	ug/L		8.9	
Indeno(1,2,3-cd)Pyrene	ug/L		0.049	
Isophorone	ug/L		600	
Nitrobenzene	ug/L		1,900	
N-Nitrosodimethylamine	ug/L		8.1	
N-Nitrosodi-n-Propylamine	ug/L		1.4	
N-Nitrosodiphenylamine	ug/L		16	
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L		0.088	
Pyrene	ug/L		11,000	
Aldrin	ug/L		0.00014	
Chlordane[8]	ug/L		0.00059	
4,4'-DDT	ug/L		0.00059	
4,4'-DDE (linked to DDT)	ug/L		0.00059	
4,4'-DDD	ug/L		0.00084	
Dieldrin	ug/L		0.00014	
Endosulfan	ug/L		0.009	
Endrin	ug/L		0.0023	
Endrin Aldehyde	ug/L		0.81	
Halomethanes[7]	µg/L		5.0	
Heptachlor	ug/L		0.00021	
Heptachlor Epoxide	ug/L		0.00011	
Hexachlorocyclohexane (HCH)[8]	µg/L		0.004	
PCBs sum [10]	ug/L		0.00017	
Toxaphene	ug/L		0.0002	

[1] As defined using Method 6410.

[2] Reasonable potential for total residual chlorine shall be “Presumptive-yes”, regardless of effluent sample results if the effluent is disinfected or otherwise chlorinated prior to discharge.

[3] Applicable only to discharges to saline lagoons (all lagoons with the exception of Buena Vista Lagoon) and estuaries of the region.

[4] Applied as an instantaneous minimum effluent limitation.

[5] Monitoring for total coliform, fecal coliform and enterococcus is only required if the groundwater extraction activity is associated with sewage collection or treatment.

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

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-tetra CDD	1.0
2,3,7,8-penta CDD	0.5
2,3,7,8-hexa CDDs	0.1
2,3,7,8-hepta CDD	0.01
Octa CDD	0.001

Isomer Group	Toxicity Equivalence Factor
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

[7] Halomethanes shall be reported as the sum of bromoform, bromethane and chloromethane.

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

[9] Hexachlorocyclohexane shall be reported as the sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.

[10] PCBs sum shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-12342, aroclor-1248, aroclor-1254, and aroclor-1260.

D. Reasonable Potential Analysis (RPA) – Surf Zone of the Pacific Ocean

1. For discharges to the surf zone of the Pacific Ocean shall provide groundwater sample results for the parameters specified in the table below. The Discharger shall compare the sample result to the applicable water quality objective/criteria trigger value. The sample result is greater than or equal to the applicable trigger value, the Discharger shall indicate reasonable potential exists for that parameter by putting “yes” in the Reasonable Potential column. If the sample result is less than the applicable trigger value criteria, the Discharger may indicate reasonable potential does not exist for that parameter by putting “no” in the Reasonable Potential column.

Table G: RPA for Discharges to the Surf Zone of the Pacific Ocean

Parameter	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Dissolved Oxygen	mg/L		5.0	
Total Coliform[1]	MPN/100mL		1,000/70[2]	
Fecal Coliform[1]	MPN/100mL		200	
Enterococcus[1]	MPN/100mL		35	
Arsenic, Total Recoverable	ug/l		23	
Cadmium, Total Recoverable	ug/l		4.0	
Chromium VI, Total Recoverable	ug/l		8.0	
Copper, Total Recoverable	ug/l		6.0	
Lead, Total Recoverable	ug/l		8.0	
Mercury, Total Recoverable	ug/l		0.16	
Nickel, Total Recoverable	ug/l		20	
Selenium, Total Recoverable	ug/l		60	
Silver, Total Recoverable	ug/l		2.3	
Zinc, Total Recoverable	ug/l		56	
Cyanide, Total	ug/l		4.0	
Total Chlorine Residual[3]	ug/l		8.0	
Ammonia (expressed as nitrogen)	ug/l		2,400	
Phenolic Compounds (non-chlorinated)	ug/l		120	
Chlorinated Phenolics	ug/l		4.0	
Endosulfan	ug/l		0.036	
Endrin	ug/l		0.008	

Parameter	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
HCH[4]	ug/l		0.016	
Acrolein	ug/l		880	
Antimony	ug/l		4,800	
Bis(2-chloroethoxy) Methane	ug/l		17.6	
Bis(2-chloroisopropyl) ether	ug/l		4,800	
Chlorobenzene	ug/l		2,300	
Chromium (III)	ug/l		760,000	
Di-n-butyl Phthalate	ug/l		14,000	
Dichlorobenzenes	ug/l		20,000	
Diethyl Phthalate	ug/l		130,000	
Dimethyl Phthalate	ug/l		3,300,000	
4,6-dinitro-2-methylphenol	ug/l		880	
2,4-dinitrophenol	ug/l		16	
Ethylbenzene	ug/l		16,000	
Fluoranthene	ug/l		60	
Hexachlorocyclopentadiene	ug/l		230	
Nitrobenzene	ug/l		20	
Thallium	ug/l		8.0	
Toluene	ug/l		340,000	
Total Petroleum Hydrocarbons	µg/L		500	
Tributyltin	ug/l		0.0056	
1,1,1-trichloroethane	ug/l		2,200,000	
Xylene	µg/		5.0	
Acrylonitrile	ug/l		0.4	
Aldrin	ug/l		0.000088	
Benzene	ug/l		24	
Benzidine	ug/l		0.00028	
Beryllium	ug/l		0.13	
Bis(2-chloroethyl) Ether	ug/l		0.18	
Bis(2-ethlyhexyl) Phthalate	ug/l		14	
Carbon Tetrachloride	ug/l		3.6	
Chlordane[5]	ug/l		0.000092	
Chlorodibromethane	ug/l		34	
Chloroform	ug/l		520	
DDT[6]	ug/l		0.00068	
1,4-dichlorobenzene	ug/l		72	
3,3'-dichlorobenzidine	ug/l		0.0324	
1,2-dichloroethane	ug/l		110	
1,1-dichloroethylene	ug/l		3.6	
Dichlorobromomethane	ug/l		25	
Dichloromethane	ug/l		1,800	
1,3-dichloropropene	ug/l		36	
Dieldrin	ug/l		0.00016	
2,4-dinitrotoluene	ug/l		10	
1,2-diphenylhydrazine	ug/l		0.64	
Halomethanes[7]	ug/l		520	

Parameter	Units	Sample Result	Water Quality Objective/Criteria Trigger Value	Reasonable Potential? (yes/no)
Heptachlor	ug/l		0.0002	
Heptachlor Epoxide	ug/l		0.00008	
Hexachlorobenzene	ug/l		0.00084	
Hexachlorobutadiene	ug/l		56	
Hexachloroethane	ug/l		10	
Isophorone	ug/l		2,900	
N-nitrosodimethylamine	ug/l		29	
N-nitrosodi-N-propylamine	ug/l		1.5	
N-nitrosodiphenylamine	ug/l		10	
PAHs[8]	ug/l		0.035	
PCBs[9]	ug/l		0.000076	
TCDD equivalents[10]	ug/l		1.6E-08	
1,1,2,2-tetrachloroethane	ug/l		9.2	
Tetrachloroethylene	ug/l		8.0	
Toxaphene	ug/l		0.00084	
Trichloroethylene	ug/l		110	
1,1,2-trichloroethane	ug/l		38	
2,4,6-trichlorophenol	ug/l		1.2	
Vinyl Chloride	ug/l		140	

[1] Only required if the groundwater extraction is related to sewage collection or treatment.

[2] For receiving waters with a beneficial use of SHELL, the applicable water quality objective is 70 MPN/100mL.

[3] Reasonable potential for total residual chlorine shall be “Presumptive-yes”, regardless of effluent sample results if the effluent is disinfected or otherwise chlorinated prior to discharge.

[4] HCH shall mean the sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.

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

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

[7] Halomethanes shall mean the sum of bromoform, bromomethane, and chloromethane.

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

[9] PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

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

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

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 (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 CFR section 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 section 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 section 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 section 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 section 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR section 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 section 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the San Diego Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 CFR section 122.41(i); Wat. Code, section 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 section 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 section 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 section 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 CWC, any substances or parameters at any location. (40 CFR section 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 section 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 section 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 section 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 section 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 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 section 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 section 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 section 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 section 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 section 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 section 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 section 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 section 122.41(n)(3)):

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

b. The permitted facility was, at the time, being properly operated (40 CFR section 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 section 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 section 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 section 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 as to that Discharger. (40 CFR section 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 coverage under the new reissued permit in accordance with procedures therein, and must comply with all conditions of the new permit. (40 CFR section 122.41(a) & (b))

C. Transfers

The NOA to discharge under this Order is not transferable to any person. The San Diego Water Board requires revocation and reissuance of the NOA to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR section 122.41(l)(3); section 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 section 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 section 122.41(j)(4); section 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 Executive Officer at any time. (40 CFR section 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR section 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and

6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 CFR section 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 CFR section 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 U.S. EPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the San Diego Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 CFR section 122.41(h); CWC section 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the San Diego Water Board, State Water Board, and/or U.S. EPA 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 section 122.41(k).)

2. All permit applications shall be signed as follows:

a. For a corporation: All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive

measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR section 122.22(a)(1).)

b. For a partnership or sole proprietorship: All permit applications shall be signed by a general partner or the proprietor, respectively. (40 CFR section 122.22(a)(2).)

c. For a municipality, state, federal, or other public agency: 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 U.S. EPA). (40 CFR section 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 U.S. EPA 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 section 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 section 122.22(b)(2)); and

c. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR section 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 section 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 section 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 section 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 section 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 another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such 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 section 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 section 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 section 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 section 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 section 122.41(l)(6)(ii)):

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

b. Any upset that exceeds any effluent limitation in this Order. (40 CFR section 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 section 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 section 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 section 122.29(b) (40 CFR section 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 section 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 CFRsection 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 this Order's requirements. (40 CFR section 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 section 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 U.S. EPA, the Discharger shall promptly submit such facts or information. (40 CFR section 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the San Diego Water Board as soon as they know or have reason to believe (40 CFR section 122.42(a)):

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

a. 100 micrograms per liter (µg/L) (40 CFR section 122.42(a)(1)(i));

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

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

d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(1)(iv).)

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" (40 CFR section 122.42(a)(2)):

a. 500 micrograms per liter (µg/L) (40 CFR section 122.42(a)(2)(i));

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

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

d. The level established by the San Diego Water Board in accordance with section 122.44(f). (40 CFR section 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act (CWA) and the Code of Federal Regulations (40 CFR section 122.48) requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the San Diego Water Board to establish monitoring, reporting, and recordkeeping requirements. Pursuant to this authority this Monitoring and Reporting Program (MRP) establishes conditions for the Discharger to conduct routine or episodic self-monitoring of the discharges regulated under this Order at specified monitoring locations. The MRP requires the Discharger to report the results to the San Diego Water Board with the information necessary to evaluate discharge characteristics and compliance status.

The purpose of the MRP is to determine and ensure compliance with effluent limitations and other requirements established in this Order, assess treatment efficiency, characterize effluents, and characterize the receiving water and the effects of the discharge on the receiving water. The MRP also specifies requirements concerning the proper use, maintenance, and installation of monitoring equipment and methods, and the monitoring type intervals and frequency necessary to yield data that are representative of the activities and discharges regulated under this Order.

Each monitoring section contains an introductory paragraph summarizing why the monitoring is needed and the key management questions the monitoring is designed to answer. In developing the list of key management questions the San Diego Water Board considered four basic types of information for each question:

- Management Information Need – Why does the San Diego Water Board need to know the answer?
- Monitoring Criteria – What monitoring will be conducted for deriving an answer to the question?
- Expected Product – How should the answer be expressed and reported?
- Possible Management Actions – What actions will be potentially influenced by the answer?

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples effluent shall be taken at the monitoring locations identified in the representative sampling and analysis program and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the San Diego Water Board.

B. Monitoring must be conducted according to United States Environmental Protection Agency (U.S. EPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act (CWA)* as amended, unless other test procedures are specified in this Order and attachments thereof or the Notice of Applicability (NOA) issued by the San Diego Water Board. Alternative test procedures not specified in this Order may also be subject to U.S. EPA approval.

C. A copy of the monitoring and reports signed, and certified as required by Attachment D, Standard Provisions V.B, of this Order, shall be submitted to the San Diego Water Board at the address listed in section VI.B.5.c of this MRP.

At any time during the term of this Order, the State or San Diego Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program web site

(http://www.waterboards.ca.gov/water_issues/programs/ciwqs/)Until such notification is given, the Discharger shall submit hard copy SMRs to the San Diego Water Board. The CIWQS web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

The San Diego Water Board is implementing a Paperless Office system to reduce paper use, increase efficiency, and provide a more effective way for Board staff, the public and interested parties to view water quality documents in electronic form. Please convert all regulatory documents, submissions, materials, and correspondence that would normally be submitted as hard copies to a searchable Portable Document Format (PDF). Data may be submitted in Excel spreadsheets. Documents that are less than 50 MB should be emailed to SanDiego@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the San Diego Water Board's street address.

D. 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 this MRP, and records of all data used to complete the application for this Order. Records shall be maintained for a minimum of five years from the date of sample, measurement, report, or application. This period may be extended by request of this San Diego Water Board or by the U.S. EPA at any time.

E. All analyses shall be performed in a laboratory certified to perform such analyses by the State Water Resources Control Board, Division of Drinking Water, in accordance with the provision of CWC section 13176 or by a laboratory approved by the San Diego Water Board. The laboratory must be accredited under the Environmental Laboratory Accreditation program (ELAP) to ensure the quality of analytical data used for regulatory purposes to meet the requirements of this Order. Additional information on ELAP can be accessed at: http://www.waterboards.ca.gov/drinking_water/certlic/labs/index.shtml.

F. The Discharger shall report in its cover letter all instances of noncompliance including those already reported under Attachment D, section V.H of this Order at the time monitoring reports are submitted. The reports shall contain the information listed in Attachment D, section V.E of this Order.

G. Records of monitoring information shall include information required under Attachment D, Standard Provisions, sections IV and V, of this Order.

H. 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 to ensure continued accuracy of the devices.

I. Monitoring results shall be reported at intervals and in a manner specified in this Order, this MRP and the NOA.

II. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is the collection and analysis of samples or measurements of effluents, after all treatment processes, to determine and quantify contaminants and to demonstrate compliance with applicable effluent limitations, standards, and other requirements of this Order.

Effluent monitoring is necessary to address the following questions:

- Does the effluent comply with permit effluent limitations, and other requirements of this Order, thereby ensuring that water quality standards are achieved in the receiving water?
- What is the mass of constituents that are discharged daily, monthly and annually?
- Is the effluent concentration or mass changing over time?
- Are 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 being well operated and maintained?

A. Effluent Sampling and Analysis Program

1. Dischargers who are enrolling under this Order shall prepare and submit a sampling and analysis program as an attachment to the NOI as discussed in Attachment C of this Order. The sampling and analysis program shall identify applicable monitoring locations for each discharge location, and provide the supporting rationale for choosing those locations. The sampling and analysis program shall specify (1) monitoring for all pollutants for which effluent limitations are anticipated as indicated in section II.B of this MRP and Attachment C of this Order; (2) analytical methods consistent with the requirements of 40 CFR section 136.3, and minimum levels consistent with the requirements of the SIP and Ocean Plan; and (3) monitoring frequencies consistent with the frequencies specified in section III.B of this MRP.

2. The San Diego Water Board may specify increased monitoring requirements on a case-by-case basis in the NOA as necessary to ensure that applicable water quality objectives are maintained in the receiving water.

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 the effluent limitations specified in section V of this Order.

B. Effluent Monitoring Parameters

Those monitoring parameters, specified below, that were identified as having reasonable potential or otherwise labeled as “Presumptive-Yes” under the procedures in Appendix C-1 of this Order, shall be incorporated into the sampling and analysis program submitted with the NOI.

Unless otherwise approved by the San Diego Water Board, effluent monitoring samples shall be collected as grab samples.

1. Freshwater Inland Surface Waters

a. All Freshwater Inland Surface Waters, including Buena Vista Lagoon.

For discharges to freshwater inland surface waters, the Discharger shall monitor effluent for those monitoring parameters specified in Table E-1 below that were identified as having reasonable potential or otherwise labeled as “Presumptive-Yes” under the procedures in Appendix C-1 of this Order. Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 parts per thousand and above and at locations where this occurs 95% of the time.

Table E-1. Effluent Monitoring for Hardness Dependent Metals

Parameter	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Cadmium, Total Recoverable[1]	µg/L	1/Month	1/Quarter
Copper, Total Recoverable [1]	µg/L	1/Month	1/Quarter
Lead, Total Recoverable [1]	µg/L	1/Month	1/Quarter
Nickel, Total Recoverable[1]	µg/L	1/Month	1/Quarter
Silver, Total Recoverable[1]	µg/L	1/Month	1/Quarter
Zinc, Total Recoverable [1]	µg/L	1/Month	1/Quarter

[1] Receiving water shall be monitored for hardness in accordance with section III.A.2 of this MRP.

b. Freshwater Inland Surface Receiving Waters designated MUN. For discharges to freshwater inland receiving waters, with a designated domestic and municipal supply (MUN) beneficial use, the Discharger shall monitor effluent for those monitoring parameters specified in Table E-2 below that were identified as having reasonable potential or otherwise labeled as "Presumptive-Yes" under the procedures in Appendix C-1 of this Order.

Table E-2. Effluent Monitoring for Discharges to Freshwater Receiving Waters (MUN)

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Flow	MGD	1/Day	1/Month
Settleable Solids	ml/L	1/Month	1/Month
Total Suspended Solids	mg/L	1/Month	1/Month
Turbidity	NTU	1/Month	1/Month
Chronic Toxicity[1]	Pass/Fail	1/Quarter	1/6-Months
pH	s.u.	1/Month	1/Month
Hydrogen Sulfide	µg/L	1/Quarter	1/Quarter
Xylene	µg/L	1/Month[2]	1/Quarter
Chlorinated Phenolics	µg/L	1/Month[2]	1/Quarter
Remaining Base/Neutral Compounds[3]	µg/L	1/Month[2]	1/Quarter
Total Petroleum Hydrocarbons	mg/L	1/Month[2]	1/Quarter
Percent Sodium	%	1/Quarter	1/Quarter
Total Nitrogen	mg/L	1/Month	1/Quarter
Total Phosphorus	mg/L	1/Month	1/Quarter
Methylene Blue Active Substances (MBAS)	mg/L	1/Quarter	1/Quarter
Fluoride	mg/L	1/Quarter	1/Quarter
Total Residual Chlorine	µg/L	1/Day	1/Week
Dissolved Oxygen	mg/L	1/Month	1/Month
Iron, Total Recoverable	mg/L	1/Month	1/Quarter
Manganese, Total Recoverable	mg/L	1/Month	1/Quarter
Total Coliform	MPN/100 mL	1/Month	1/Quarter
Fecal Coliform	MPN/100 mL	1/Month	1/Quarter
Dibromochloropropane	µg/L	1/Month[2]	1/Quarter
Ethylene Dibromide	µg/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Methyl-Tert-Butyl Ether (MTBE)	µg/L	1/Month[2]	1/Quarter
Antimony, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Arsenic, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Chromium (III) , Total Recoverable	ug/L	1/Month[2]	1/Quarter
Chromium (VI) , Total Recoverable	ug/L	1/Month[2]	1/Quarter
Mercury, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Selenium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Thallium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Cyanide, Total	ug/L	1/Month[2]	1/Quarter
2,3,7,8 TCDD	ug/L	1/Month[2]	1/Quarter
TCDD Equivalents[4]	ug/L	1/Month[2]	1/Quarter
Acrolein	ug/L	1/Month[2]	1/Quarter
Acrylonitrile	ug/L	1/Month[2]	1/Quarter
Benzene	ug/L	1/Month[2]	1/Quarter
Bromoform	ug/L	1/Month[2]	1/Quarter
Carbon Tetrachloride	ug/L	1/Month[2]	1/Quarter
Chlorobenzene	ug/L	1/Month[2]	1/Quarter
Chlorodibromomethane	ug/L	1/Month[2]	1/Quarter
Dichlorobromomethane	ug/L	1/Month[2]	1/Quarter
1,2-Dichloroethane	ug/L	1/Month[2]	1/Quarter
1,1-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,2-Dichloropropane	ug/L	1/Month[2]	1/Quarter
1,3-Dichloropropylene	ug/L	1/Month[2]	1/Quarter
Ethylbenzene	ug/L	1/Month[2]	1/Quarter
Methyl Bromide	ug/L	1/Month[2]	1/Quarter
Methylene Chloride	ug/L	1/Month[2]	1/Quarter
1,1,2,2-Tetrachloroethane	ug/L	1/Month[2]	1/Quarter
Tetrachloroethylene	ug/L	1/Month[2]	1/Quarter
Toluene	ug/L	1/Month[2]	1/Quarter
1,2-Trans-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,1,2-Trichloroethane	ug/L	1/Month[2]	1/Quarter
Trichloroethylene	ug/L	1/Month[2]	1/Quarter
Vinyl Chloride	ug/L	1/Month[2]	1/Quarter
2-Chlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dichlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dimethylphenol	ug/L	1/Month[2]	1/Quarter
4,6-dinitro-o-resol	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrophenol	ug/L	1/Month[2]	1/Quarter
Pentachlorophenol	ug/L	1/Month[2]	1/Quarter
Phenol	ug/L	1/Month[2]	1/Quarter
2,4,6-Trichlorophenol	ug/L	1/Month[2]	1/Quarter
Acenaphthene	ug/L	1/Month[2]	1/Quarter
Anthracene	ug/L	1/Month[2]	1/Quarter
Benzidine	ug/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Benzo(a)Anthracene	ug/L	1/Month[2]	1/Quarter
Benzo(a)Pyrene	ug/L	1/Month[2]	1/Quarter
Benzo(b)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Benzo(k)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroethyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroisopropyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Ethylhexyl)Phthalate	ug/L	1/Month[2]	1/Quarter
Butylbenzyl Phthalate	ug/L	1/Month[2]	1/Quarter
2-Chloronaphthalene	ug/L	1/Month[2]	1/Quarter
Chrysene	ug/L	1/Month[2]	1/Quarter
Dibenzo(a,h)Anthracene	ug/L	1/Month[2]	1/Quarter
1,2-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,3-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,4-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
3,3 Dichlorobenzidine	ug/L	1/Month[2]	1/Quarter
Diethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Dimethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Di-n-Butyl Phthalate	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrotoluene	ug/L	1/Month[2]	1/Quarter
1,2-Diphenylhydrazine	ug/L	1/Month[2]	1/Quarter
Fluoranthene	ug/L	1/Month[2]	1/Quarter
Fluorene	ug/L	1/Month[2]	1/Quarter
Hexachlorobenzene	ug/L	1/Month[2]	1/Quarter
Hexachlorobutadiene	ug/L	1/Month[2]	1/Quarter
Hexachlorocyclopentadiene	ug/L	1/Month[2]	1/Quarter
Hexachloroethane	ug/L	1/Month[2]	1/Quarter
Indeno(1,2,3-cd)Pyrene	ug/L	1/Month[2]	1/Quarter
Isophorone	ug/L	1/Month[2]	1/Quarter
Nitrobenzene	ug/L	1/Month[2]	1/Quarter
N-Nitrosodimethylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodi-n-Propylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodiphenylamine	ug/L	1/Month[2]	1/Quarter
Pyrene	ug/L	1/Month[2]	1/Quarter
Aldrin	ug/L	1/Month[2]	1/Quarter
alpha-BHC	ug/L	1/Month[2]	1/Quarter
beta-BHC	ug/L	1/Month[2]	1/Quarter
gamma-BHC	ug/L	1/Month[2]	1/Quarter
Chlordane[5]	ug/L	1/Month[2]	1/Quarter
4,4'-DDT	ug/L	1/Month[2]	1/Quarter
4,4'-DDE	ug/L	1/Month[2]	1/Quarter
4,4'-DDD	ug/L	1/Month[2]	1/Quarter
Dieldrin	ug/L	1/Month[2]	1/Quarter
alpha-Endosulfan	ug/L	1/Month[2]	1/Quarter
beta-Endosulfan	ug/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Endosulfan Sulfate	ug/L	1/Month[2]	1/Quarter
Endrin	ug/L	1/Month[2]	1/Quarter
Endrin Aldehyde	ug/L	1/Month[2]	1/Quarter
Heptachlor	ug/L	1/Month[2]	1/Quarter
Heptachlor Epoxide	ug/L	1/Month[2]	1/Quarter
PCBs sum[6]	ug/L	1/Month[2]	1/Quarter
Toxaphene	ug/L	1/Month[2]	1/Quarter

[1] Chronic toxicity shall be determined as specified in section IV of this MRP.

[2] If the pollutant is not detected in the effluent for six consecutive months, the monitoring frequency for this pollutant may be reduced to once per quarter. Upon detection of this pollutant in the effluent, the monitoring frequency shall return to monthly.

[3] As defined using Method 6410.

[4] TCDD equivalents shall be reported as 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

[5] Chlordane shall be reported as the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[6] PCBs shall be reported as the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

c. Non-Municipal Freshwater Receiving Waters, including Buena Vista Lagoon.

For discharges to freshwater inland surface receiving waters, without a designated domestic and municipal supply (MUN) beneficial use, the Discharger shall monitor effluent for those monitoring parameters specified in Table E-3 below that were identified as having reasonable potential or otherwise labeled as “Presumptive-Yes” under the procedures in Appendix C-1 of this Order.

Table E-3. Effluent Monitoring for Discharges to Non-Municipal Freshwater Receiving Waters, including Buena Vista Lagoon (non-MUN)

Parameter	Unit	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Flow	MGD	1/Day	1/Month
Settleable Solids	ml/L	1/Month	1/Month
Total Suspended Solids	mg/L	1/Month	1/Month
Turbidity	NTU	1/Month	1/Month
Chronic Toxicity[1]	Pass/Fail	1/Quarter	1/6-Months
pH	s.u.	1/Month	1/Month
Hydrogen Sulfide	µg/L	1/Quarter	1/Quarter
Xylene	µg/L	1/Month[2]	1/Quarter
Chlorinated Phenolics	µg/L	1/Month[2]	1/Quarter
Remaining Base/Neutral Compounds[3]	µg/L	1/Month[2]	1/Quarter
Total Petroleum Hydrocarbons	mg/L	1/Month[2]	1/Quarter
Percent Sodium	%	1/Quarter	1/Quarter
Total Nitrogen	mg/L	1/Month	1/Quarter
Total Phosphorus	mg/L	1/Month	1/Quarter
Methylene Blue Active Substances (MBAS)	mg/L	1/Quarter	1/Quarter
Fluoride	mg/L	1/Quarter	1/Quarter
Total Residual Chlorine	µg/L	1/Day	1/Week
Dissolved Oxygen	mg/L	1/Month	1/Month
Iron, Total Recoverable	mg/L	1/Month	1/Quarter
Manganese, Total Recoverable	mg/L	1/Month	1/Quarter
Total Coliform	MPN/100 mL	1/Month	1/Quarter
Fecal Coliform	MPN/100 mL	1/Month	1/Quarter
Dibromochloropropane	µg/L	1/Month[2]	1/Quarter
Ethylene Dibromide	µg/L	1/Month[2]	1/Quarter
Antimony, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Arsenic, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Chromium (III) , Total Recoverable	ug/L	1/Month[2]	1/Quarter
Chromium (VI) , Total Recoverable	ug/L	1/Month[2]	1/Quarter
Mercury, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Selenium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Thallium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Cyanide, Total	ug/L	1/Month[2]	1/Quarter
2,3,7,8 TCDD	ug/L	1/Month[2]	1/Quarter
TCDD Equivalents[4]	ug/L	1/Month[2]	1/Quarter
Acrolein	ug/L	1/Month[2]	1/Quarter
Acrylonitrile	ug/L	1/Month[2]	1/Quarter
Benzene	ug/L	1/Month[2]	1/Quarter
Bromoform	ug/L	1/Month[2]	1/Quarter
Carbon Tetrachloride	ug/L	1/Month[2]	1/Quarter
Chlorobenzene	ug/L	1/Month[2]	1/Quarter
Chlorodibromomethane	ug/L	1/Month[2]	1/Quarter
Dichlorobromomethane	ug/L	1/Month[2]	1/Quarter

Parameter	Unit	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
1,2-Dichloroethane	ug/L	1/Month[2]	1/Quarter
1,1-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,2-Dichloropropane	ug/L	1/Month[2]	1/Quarter
1,3-Dichloropropylene	ug/L	1/Month[2]	1/Quarter
Ethylbenzene	ug/L	1/Month[2]	1/Quarter
Methyl Bromide	ug/L	1/Month[2]	1/Quarter
Methylene Chloride	ug/L	1/Month[2]	1/Quarter
1,1,2,2-Tetrachloroethane	ug/L	1/Month[2]	1/Quarter
Tetrachloroethylene	ug/L	1/Month[2]	1/Quarter
Toluene	ug/L	1/Month[2]	1/Quarter
1,2-Trans-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,1,2-Trichloroethane	ug/L	1/Month[2]	1/Quarter
Trichloroethylene	ug/L	1/Month[2]	1/Quarter
Vinyl Chloride	ug/L	1/Month[2]	1/Quarter
2-Chlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dichlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dimethylphenol	ug/L	1/Month[2]	1/Quarter
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrophenol	ug/L	1/Month[2]	1/Quarter
Pentachlorophenol	ug/L	1/Month[2]	1/Quarter
Phenol	ug/L	1/Month[2]	1/Quarter
2,4,6-Trichlorophenol	ug/L	1/Month[2]	1/Quarter
Acenaphthene	ug/L	1/Month[2]	1/Quarter
Anthracene	ug/L	1/Month[2]	1/Quarter
Benzidine	ug/L	1/Month[2]	1/Quarter
Benzo(a)Anthracene	ug/L	1/Month[2]	1/Quarter
Benzo(a)Pyrene	ug/L	1/Month[2]	1/Quarter
Benzo(b)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Benzo(k)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroethyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroisopropyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Ethylhexyl)Phthalate	ug/L	1/Month[2]	1/Quarter
Butylbenzyl Phthalate	ug/L	1/Month[2]	1/Quarter
2-Chloronaphthalene	ug/L	1/Month[2]	1/Quarter
Chrysene	ug/L	1/Month[2]	1/Quarter
Dibenzo(a,h)Anthracene	ug/L	1/Month[2]	1/Quarter
1,2-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,3-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,4-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
3,3 Dichlorobenzidine	ug/L	1/Month[2]	1/Quarter
Diethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Dimethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Di-n-Butyl Phthalate	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrotoluene	ug/L	1/Month[2]	1/Quarter
1,2-Diphenylhydrazine	ug/L	1/Month[2]	1/Quarter

Parameter	Unit	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Fluoranthene	ug/L	1/Month[2]	1/Quarter
Fluorene	ug/L	1/Month[2]	1/Quarter
Hexachlorobenzene	ug/L	1/Month[2]	1/Quarter
Hexachlorobutadiene	ug/L	1/Month[2]	1/Quarter
Hexachlorocyclopentadiene	ug/L	1/Month[2]	1/Quarter
Hexachloroethane	ug/L	1/Month[2]	1/Quarter
Indeno(1,2,3-cd)Pyrene	ug/L	1/Month[2]	1/Quarter
Isophorone	ug/L	1/Month[2]	1/Quarter
Nitrobenzene	ug/L	1/Month[2]	1/Quarter
N-Nitrosodimethylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodi-n-Propylamine	ug/L	1/Month[2]	1/Quarter
Pyrene	ug/L	1/Month[2]	1/Quarter
Aldrin	ug/L	1/Month[2]	1/Quarter
alpha-BHC	ug/L	1/Month[2]	1/Quarter
beta-BHC	ug/L	1/Month[2]	1/Quarter
gamma-BHC	ug/L	1/Month[2]	1/Quarter
Chlordane[5]	ug/L	1/Month[2]	1/Quarter
4,4'-DDT	ug/L	1/Month[2]	1/Quarter
4,4'-DDE (linked to DDT)	ug/L	1/Month[2]	1/Quarter
4,4'-DDD	ug/L	1/Month[2]	1/Quarter
Dieldrin	ug/L	1/Month[2]	1/Quarter
alpha-Endosulfan	ug/L	1/Month[2]	1/Quarter
beta-Endosulfan	ug/L	1/Month[2]	1/Quarter
Endosulfan Sulfate	ug/L	1/Month[2]	1/Quarter
Endrin	ug/L	1/Month[2]	1/Quarter
Endrin Aldehyde	ug/L	1/Month[2]	1/Quarter
Heptachlor	ug/L	1/Month[2]	1/Quarter
Heptachlor Epoxide	ug/L	1/Month[2]	1/Quarter
PCBs sum[6]	ug/L	1/Month[2]	1/Quarter
Toxaphene	ug/L	1/Month[2]	1/Quarter

[1] Chronic toxicity shall be determined as specified in section IV of this MRP.

[2] If the pollutant is not detected in the effluent for six consecutive months, the monitoring frequency for this pollutant may be reduced to once per quarter. Upon detection in the effluent, the monitoring frequency shall return to monthly.

[3] As defined using Method 6410.

[4] TCDD equivalents shall be reported as 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

Isomer Group	Toxicity Equivalence Factor
2,3,7,8-hexa CDFs	0.1
2,3,7,8-hepta CDFs	0.01
Octa CDF	0.001

[5] Chlordane shall be reported as the the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[6] PCBs shall be reported as the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

2. Effluent Monitoring – Saltwater Inland Surface Waters, Not Including Bays and Estuaries

For discharges to inland saltwater receiving waters, but not including bays and estuaries, the Discharger shall monitor effluent for those monitoring parameters specified in Table E-4 below that were identified as having reasonable potential or otherwise labeled as "Presumptive-yes" under the procedures in Appendix C-1 of this Order. Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 parts per thousand and above and at locations where this occurs 95% of the time.

Table E-4. Effluent Monitoring for Discharges to Saltwater Inland Surface Waters, not including Bays and Estuaries

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Flow	MGD	1/Day	1/Month
Settleable Solids	ml/L	1/Month	1/Month
Total Suspended Solids	mg/L	1/Month	1/Month
Turbidity	NTU	1/Month	1/Month
Chronic Toxicity[1]	Pass/Fail	1/Quarter	1/6-Months
pH	s.u.	1/Month	1/Month
Hydrogen Sulfide	µg/L	1/Quarter	1/Quarter
Xylene	µg/L	1/Month[2]	1/Quarter
Chlorinated Phenolics	µg/L	1/Month[2]	1/Quarter
Remaining Base/Neutral Compounds[3]	µg/L	1/Month[2]	1/Quarter
Total Petroleum Hydrocarbons	mg/L	1/Month[2]	1/Quarter
Percent Sodium	%	1/Quarter	1/Quarter
Total Nitrogen	mg/L	1/Month	1/Quarter
Total Phosphorus	mg/L	1/Month	1/Quarter
Methylene Blue Active Substances (MBAS)	mg/L	1/Quarter	1/Quarter
Fluoride	mg/L	1/Quarter	1/Quarter
Total Residual Chlorine	µg/L	1/Day	1/Week
Dissolved Oxygen	mg/L	1/Month	1/Month
Iron, Total Recoverable	mg/L	1/Month	1/Quarter
Manganese, Total Recoverable	mg/L	1/Month	1/Quarter
Total Coliform	MPN/100 mL	1/Month	1/Quarter
Fecal Coliform	MPN/100 mL	1/Month	1/Quarter
Dibromochloropropane	µg/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Ethylene Dibromide	µg/L	1/Month[2]	1/Quarter
Antimony, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Arsenic, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Cadmium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Chromium (VI) , Total Recoverable	ug/L	1/Month[2]	1/Quarter
Copper, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Lead, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Mercury, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Nickel, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Selenium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Silver, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Thallium, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Zinc, Total Recoverable	ug/L	1/Month[2]	1/Quarter
Cyanide, Total	ug/L	1/Month[2]	1/Quarter
2,3,7,8 TCDD	ug/L	1/Month[2]	1/Quarter
TCDD Equivalents[4]	ug/L	1/Month[2]	1/Quarter
Acrolein	ug/L	1/Month[2]	1/Quarter
Acrylonitrile	ug/L	1/Month[2]	1/Quarter
Benzene	ug/L	1/Month[2]	1/Quarter
Bromoform	ug/L	1/Month[2]	1/Quarter
Carbon Tetrachloride	ug/L	1/Month[2]	1/Quarter
Chlorobenzene	ug/L	1/Month[2]	1/Quarter
Chlorodibromomethane	ug/L	1/Month[2]	1/Quarter
Dichlorobromomethane	ug/L	1/Month[2]	1/Quarter
1,2-Dichloroethane	ug/L	1/Month[2]	1/Quarter
1,1-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,2-Dichloropropane	ug/L	1/Month[2]	1/Quarter
1,3-Dichloropropylene	ug/L	1/Month[2]	1/Quarter
Ethylbenzene	ug/L	1/Month[2]	1/Quarter
Methyl Bromide	ug/L	1/Month[2]	1/Quarter
Methylene Chloride	ug/L	1/Month[2]	1/Quarter
1,1,2,2-Tetrachloroethane	ug/L	1/Month[2]	1/Quarter
Tetrachloroethylene	ug/L	1/Month[2]	1/Quarter
Toluene	ug/L	1/Month[2]	1/Quarter
1,2-Trans-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,1,2-Trichloroethane	ug/L	1/Month[2]	1/Quarter
Trichloroethylene	ug/L	1/Month[2]	1/Quarter
Vinyl Chloride	ug/L	1/Month[2]	1/Quarter
2-Chlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dichlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dimethylphenol	ug/L	1/Month[2]	1/Quarter
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrophenol	ug/L	1/Month[2]	1/Quarter
Pentachlorophenol	ug/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Phenol	ug/L	1/Month[2]	1/Quarter
2,4,6-Trichlorophenol	ug/L	1/Month[2]	1/Quarter
Acenaphthene	ug/L	1/Month[2]	1/Quarter
Anthracene	ug/L	1/Month[2]	1/Quarter
Benzidine	ug/L	1/Month[2]	1/Quarter
Benzo(a)Anthracene	ug/L	1/Month[2]	1/Quarter
Benzo(a)Pyrene	ug/L	1/Month[2]	1/Quarter
Benzo(b)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Benzo(k)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroethyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroisopropyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Ethylhexyl)Phthalate	ug/L	1/Month[2]	1/Quarter
Butylbenzyl Phthalate	ug/L	1/Month[2]	1/Quarter
2-Chloronaphthalene	ug/L	1/Month[2]	1/Quarter
Chrysene	ug/L	1/Month[2]	1/Quarter
Dibenzo(a,h)Anthracene	ug/L	1/Month[2]	1/Quarter
1,2-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,3-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,4-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
3,3 Dichlorobenzidine	ug/L	1/Month[2]	1/Quarter
Diethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Dimethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Di-n-Butyl Phthalate	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrotoluene	ug/L	1/Month[2]	1/Quarter
1,2-Diphenylhydrazine	ug/L	1/Month[2]	1/Quarter
Fluoranthene	ug/L	1/Month[2]	1/Quarter
Fluorene	ug/L	1/Month[2]	1/Quarter
Hexachlorobenzene	ug/L	1/Month[2]	1/Quarter
Hexachlorobutadiene	ug/L	1/Month[2]	1/Quarter
Hexachlorocyclopentadiene	ug/L	1/Month[2]	1/Quarter
Hexachloroethane	ug/L	1/Month[2]	1/Quarter
Indeno(1,2,3-cd)Pyrene	ug/L	1/Month[2]	1/Quarter
Isophorone	ug/L	1/Month[2]	1/Quarter
Nitrobenzene	ug/L	1/Month[2]	1/Quarter
N-Nitrosodimethylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodi-n-Propylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodiphenylamine	ug/L	1/Month[2]	1/Quarter
Pyrene	ug/L	1/Month[2]	1/Quarter
Aldrin	ug/L	1/Month[2]	1/Quarter
alpha-BHC	ug/L	1/Month[2]	1/Quarter
beta-BHC	ug/L	1/Month[2]	1/Quarter
gamma-BHC	ug/L	1/Month[2]	1/Quarter
Chlordane[5]	ug/L	1/Month[2]	1/Quarter
4,4'-DDT	ug/L	1/Month[2]	1/Quarter
4,4'-DDE (linked to DDT)	ug/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
4,4'-DDD	ug/L	1/Month[2]	1/Quarter
Dieldrin	ug/L	1/Month[2]	1/Quarter
alpha-Endosulfan	ug/L	1/Month[2]	1/Quarter
beta-Endosulfan	ug/L	1/Month[2]	1/Quarter
Endosulfan Sulfate	ug/L	1/Month[2]	1/Quarter
Endrin	ug/L	1/Month[2]	1/Quarter
Endrin Aldehyde	ug/L	1/Month[2]	1/Quarter
Heptachlor	ug/L	1/Month[2]	1/Quarter
Heptachlor Epoxide	ug/L	1/Month[2]	1/Quarter
PCBs sum[6]	ug/L	1/Month[2]	1/Quarter
Toxaphene	ug/L	1/Month[2]	1/Quarter

[1] Chronic toxicity shall be determined as specified in section IV of this MRP.

[2] If the pollutant is not detected in the effluent for six consecutive months, the monitoring frequency for this pollutant may be reduced to once per quarter. Upon detection in the effluent, the monitoring frequency shall return to monthly.

[3] As defined using Method 6410.

[4] TCDD equivalents shall be reported as the 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

[5] Chlordane shall be reported as the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[6] PCBs shall be reported as the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

3. Effluent Monitoring - Bays, Lagoons, and Estuaries, not including Buena Vista Lagoon

For discharges to bays and estuaries, not including Buena Vista Lagoon, the Discharger shall monitor effluent for those monitoring parameters specified in Table E-5 below that were identified as having reasonable potential or otherwise labeled as “Presumptive-yes” under the procderes in Appendix C-1 of this Order.

Table E-5. Effluent Monitoring for Discharges to Bays, Lagoons, and Estuaries, not including Buena Vista Lagoon

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Flow	MGD	1/Day	1/Month
Settleable Solids	ml/L	1/Month	1/Month
Total Suspended Solids	mg/L	1/Month	1/Month
Turbidity	NTU	1/Month	1/Month
Chronic Toxicity[1]	Pass/Fail	1/Quarter	1/6-Months
pH	s.u.	1/Month	1/Month
Hydrogen Sulfide	µg/L	1/Quarter	1/Quarter
Xylene	µg/L	1/Month[2]	1/Quarter
Chlorinated Phenolics	µg/L	1/Month[2]	1/Quarter
Base/Neutral Compounds[3]	µg/L	1/Month	1/Quarter
Total Petroleum Hydrocarbons	µg/L	1/Month[2]	1/Quarter
Total Residual Chlorine	µg/L	1/Day	1/Week
Ammonia, Total	µg/L	1/Month	1/Quarter
Total Nitrogen	mg/L	1/Month	1/Quarter
Total Phosphorus	mg/L	1/Month	1/Quarter
Dissolved Oxygen	mg/L	1/Month	1/Month
Total Coliform[4]	MPN/100ml	1/Month	1/Quarter
Fecal Coliform[4]	MPN/100ml	1/Month	1/Quarter
Enterococcus[4]	MPN/100ml	1/Month	1/Quarter
Methyl-tert-butyl Ether	µg/L	1/Month	1/Quarter
Antimony, Total Recoverable	ug/L	1/Month	1/Quarter
Arsenic, Total Recoverable	ug/L	1/Month	1/Quarter
Cadmium , Total Recoverable	ug/L	1/Month	1/Quarter
Chromium (VI), Total Recoverable	ug/L	1/Month	1/Quarter
Copper, Total Recoverable	ug/L	1/Month	1/Quarter
Lead, Total Recoverable	ug/L	1/Month	1/Quarter
Mercury, Total Recoverable	ug/L	1/Month	1/Quarter
Nickel, Total Recoverable	ug/L	1/Month	1/Quarter
Selenium, Total Recoverable	ug/L	1/Month	1/Quarter
Silver, Total Recoverable	ug/L	1/Month	1/Quarter
Thallium, Total Recoverable	ug/L	1/Month	1/Quarter
Zinc, Total Recoverable	ug/L	1/Month	1/Quarter
Tributyltin	µg/L	1/Month[2]	1/Quarter
Cyanide, total	ug/L	1/Month[2]	1/Quarter
TCDD Equivalents[4]	ug/L	1/Month[2]	1/Quarter
Acrolein	ug/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Acrylonitrile	ug/L	1/Month[2]	1/Quarter
Benzene	ug/L	1/Month[2]	1/Quarter
Carbon Tetrachloride	ug/L	1/Month[2]	1/Quarter
Chlorobenzene	ug/L	1/Month[2]	1/Quarter
Chlorodibromomethane	ug/L	1/Month[2]	1/Quarter
Dichlorobromomethane	ug/L	1/Month[2]	1/Quarter
Dichloromethane	µg/L	1/Month[2]	1/Quarter
1,2-Dichloroethane	ug/L	1/Month[2]	1/Quarter
1,1-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,2-Dichloropropane	ug/L	1/Month[2]	1/Quarter
1,3-Dichloropropylene	ug/L	1/Month[2]	1/Quarter
Ethylbenzene	ug/L	1/Month[2]	1/Quarter
Phenolic Compounds (non-chlorinated)	µg/L	1/Month[2]	1/Quarter
1,1,2,2-Tetrachloroethane	ug/L	1/Month[2]	1/Quarter
Tetrachloroethylene	ug/L	1/Month[2]	1/Quarter
Toluene	ug/L	1/Month[2]	1/Quarter
1,2-Trans-Dichloroethylene	ug/L	1/Month[2]	1/Quarter
1,1,1-trichloroethane	µg/L	1/Month[2]	1/Quarter
1,1,2-Trichloroethane	ug/L	1/Month[2]	1/Quarter
Trichloroethylene	ug/L	1/Month[2]	1/Quarter
Vinyl Chloride	ug/L	1/Month[2]	1/Quarter
Chlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dichlorophenol	ug/L	1/Month[2]	1/Quarter
2,4-Dimethylphenol	ug/L	1/Month[2]	1/Quarter
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrophenol	ug/L	1/Month[2]	1/Quarter
Pentachlorophenol	ug/L	1/Month[2]	1/Quarter
Phenol	ug/L	1/Month[2]	1/Quarter
2,4,6-Trichlorophenol	ug/L	1/Month[2]	1/Quarter
Acenaphthene	ug/L	1/Month[2]	1/Quarter
Anthracene	ug/L	1/Month[2]	1/Quarter
Benzidine	ug/L	1/Month[2]	1/Quarter
Benzo(a)Anthracene	ug/L	1/Month[2]	1/Quarter
Benzo(a)Pyrene	ug/L	1/Month[2]	1/Quarter
Benzo(b)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Benzo(k)Fluoranthene	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroethyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Chloroisopropyl)Ether	ug/L	1/Month[2]	1/Quarter
Bis(2-Ethylhexyl)Phthalate	ug/L	1/Month[2]	1/Quarter
Butylbenzyl Phthalate	ug/L	1/Month[2]	1/Quarter
2-Chloronaphthalene	ug/L	1/Month[2]	1/Quarter
Chrysene	ug/L	1/Month[2]	1/Quarter
Dibenzo(a,h)Anthracene	ug/L	1/Month[2]	1/Quarter
1,2-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
1,3-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
1,4-Dichlorobenzene	ug/L	1/Month[2]	1/Quarter
3,3 Dichlorobenzidine	ug/L	1/Month[2]	1/Quarter
Diethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Dimethyl Phthalate	ug/L	1/Month[2]	1/Quarter
Di-n-Butyl Phthalate	ug/L	1/Month[2]	1/Quarter
2,4-Dinitrotoluene	ug/L	1/Month[2]	1/Quarter
1,2-Diphenylhydrazine	ug/L	1/Month[2]	1/Quarter
Fluoranthene	ug/L	1/Month[2]	1/Quarter
Fluorene	ug/L	1/Month[2]	1/Quarter
Hexachlorobenzene	ug/L	1/Month[2]	1/Quarter
Hexachlorobutadiene	ug/L	1/Month[2]	1/Quarter
Hexachlorocyclopentadiene	ug/L	1/Month[2]	1/Quarter
Hexachloroethane	ug/L	1/Month[2]	1/Quarter
Indeno(1,2,3-cd)Pyrene	ug/L	1/Month[2]	1/Quarter
Isophorone	ug/L	1/Month[2]	1/Quarter
Nitrobenzene	ug/L	1/Month[2]	1/Quarter
N-Nitrosodimethylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodi-n-Propylamine	ug/L	1/Month[2]	1/Quarter
N-Nitrosodiphenylamine	ug/L	1/Month[2]	1/Quarter
Polynuclear Aromatic Hydrocarbons (PAHs)	µg/L	1/Month[2]	1/Quarter
Pyrene	ug/L	1/Month[2]	1/Quarter
Aldrin	ug/L	1/Month[2]	1/Quarter
Chlordane[5]	ug/L	1/Month[2]	1/Quarter
4,4'-DDT	ug/L	1/Month[2]	1/Quarter
4,4'-DDE (linked to DDT)	ug/L	1/Month[2]	1/Quarter
4,4'-DDD	ug/L	1/Month[2]	1/Quarter
Dieldrin	ug/L	1/Month[2]	1/Quarter
Endosulfan	ug/L	1/Month[2]	1/Quarter
Endrin	ug/L	1/Month[2]	1/Quarter
Endrin Aldehyde	ug/L	1/Month[2]	1/Quarter
Halomethanes[6]	µg/L	1/Month[2]	1/Quarter
Heptachlor	ug/L	1/Month[2]	1/Quarter
Heptachlor Epoxide	ug/L	1/Month[2]	1/Quarter
Hexachlorocyclohexane (HCH)[7]	µg/L	1/Month[2]	1/Quarter
PCBs sum[8]	ug/L	1/Month[2]	1/Quarter
Toxaphene	ug/L	1/Month[2]	1/Quarter

[1] Chronic toxicity shall be determined as specified in section IV of this MRP.

[2] If the pollutant is not detected in the effluent for six consecutive months, the monitoring frequency for this pollutant may be reduced to once per quarter. Upon detection in the effluent, monitoring shall return to monthly.

[3] As defined using Method 6410.

[4] TCDD equivalents shall be reported as 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

[5] Chlordane shall be reported as the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.
[6] Halomethanes shall be reported as the sum of bromoform, bromethane and chloromethane.
[7] Hexachlorocyclohexane shall be reported as the sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.
[8] PCBs sum shall be reported as the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

4. Effluent Monitoring – Surf Zone of the Pacific Ocean

For discharges to the surf zone of the Pacific Ocean, the Discharger shall monitor effluent for those monitoring parameters specified in Table E-6 below that were identified as having reasonable potential or otherwise labeled as “Presumptive-Yes” under the procedures in Appendix C-1 of this Order.

Table E-6. Effluent Monitoring for Discharges to the Pacific Ocean (Surf Zone)

Parameter	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Flow	MGD	1/Day	1/Month
Grease and Oil	mg/L	1/Month	1/Month
Suspended Solids	mg/L	1/Month	1/Month
Settleable Solids	mL/L	1/Month	1/Month
Turbidity	NTU	1/Month	1/Month
Acute Toxicity[1]	TUa	1/Quarter	1/6-Months
Chronic Toxicity[1]	TUc	1/Quarter	1/6-Months
pH	s.u.	1/Month	1/Month
Dissolved Oxygen	mg/L	1/Month	1/Month
Total Coliform	MPN/100mL	1/Month	1/Quarter
Fecal Coliform	MPN/100mL	1/Month	1/Quarter
Enterococcus	MPN/100mL	1/Month	1/Quarter
Arsenic, Total Recoverable	ug/l	1/Month	1/Quarter
Cadmium, Total Recoverable	ug/l	1/Month	1/Quarter
Chromium VI, Total Recoverable	ug/l	1/Month	1/Quarter
Copper, Total Recoverable	ug/l	1/Month	1/Quarter
Lead, Total Recoverable	ug/l	1/Month	1/Quarter

Parameter	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Mercury, Total Recoverable	ug/l	1/Month	1/Quarter
Nickel, Total Recoverable	ug/l	1/Month	1/Quarter
Selenium, Total Recoverable	ug/l	1/Month	1/Quarter
Silver, Total Recoverable	ug/l	1/Month	1/Quarter
Zinc, Total Recoverable	ug/l	1/Month	1/Quarter
Cyanide, Total	ug/l	1/Month	1/Quarter
Total Chlorine Residual	ug/l	1/Day	1/Week
Ammonia (expressed as nitrogen)	ug/l	1/Month	1/Quarter
Phenolic Compounds (non-chlorinated)	ug/l	1/Month[2]	1/Quarter
Chlorinated Phenolics	ug/l	1/Month[2]	1/Quarter
Endosulfan	ug/l	1/Month[2]	1/Quarter
Endrin	ug/l	1/Month[2]	1/Quarter
HCH[3]	ug/l	1/Month[2]	1/Quarter
Acrolein	ug/l	1/Month[2]	1/Quarter
Antimony	ug/l	1/Month[2]	1/Quarter
Bis(2-chloroethoxy) Methane	ug/l	1/Month[2]	1/Quarter
Bis(2-chloroisopropyl) ether	ug/l	1/Month[2]	1/Quarter
Chlorobenzene	ug/l	1/Month[2]	1/Quarter
Chromium (III)	ug/l	1/Month[2]	1/Quarter
Di-n-butyl Phthalate	ug/l	1/Month[2]	1/Quarter
Dichlorobenzenes	ug/l	1/Month[2]	1/Quarter
Diethyl Phthalate	ug/l	1/Month[2]	1/Quarter
Dimethyl Phthalate	ug/l	1/Month[2]	1/Quarter
4,6-dinitro-2-methylphenol	ug/l	1/Month[2]	1/Quarter
2,4-dinitrophenol	ug/l	1/Month[2]	1/Quarter
Ethylbenzene	ug/l	1/Month[2]	1/Quarter
Fluoranthene	ug/l	1/Month[2]	1/Quarter
Hexachlorocyclopentadiene	ug/l	1/Month[2]	1/Quarter
Nitrobenzene	ug/l	1/Month[2]	1/Quarter
Thallium	ug/l	1/Month[2]	1/Quarter
Toluene	ug/l	1/Month[2]	1/Quarter
Total Petroleum Hydrocarbons	µg/L	1/Month[2]	1/Quarter
Tributyltin	ug/l	1/Month[2]	1/Quarter
1,1,1-trichloroethane	ug/l	1/Month[2]	1/Quarter
Xylene	µg/	1/Month[2]	1/Quarter
Acrylonitrile	ug/l	1/Month[2]	1/Quarter
Aldrin	ug/l	1/Month[2]	1/Quarter
Benzene	ug/l	1/Month[2]	1/Quarter
Benzidine	ug/l	1/Month[2]	1/Quarter
Beryllium	ug/l	1/Month[2]	1/Quarter
Bis(2-chloroethyl) Ether	ug/l	1/Month[2]	1/Quarter
Bis(2-ethlyhexyl) Phthalate	ug/l	1/Month[2]	1/Quarter
Carbon Tetrachloride	ug/l	1/Month[2]	1/Quarter
Chlordane[4]	ug/l	1/Month[2]	1/Quarter

Parameter	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Chlorodibromethane	ug/l	1/Month[2]	1/Quarter
Chloroform	ug/l	1/Month[2]	1/Quarter
DDT[5]	ug/l	1/Month[2]	1/Quarter
1,4-dichlorobenzene	ug/l	1/Month[2]	1/Quarter
3,3'-dichlorobenzidine	ug/l	1/Month[2]	1/Quarter
1,2-dichloroethane	ug/l	1/Month[2]	1/Quarter
1,1-dichloroethylene	ug/l	1/Month[2]	1/Quarter
Dichlorobromomethane	ug/l	1/Month[2]	1/Quarter
Dichloromethane	ug/l	1/Month[2]	1/Quarter
1,3-dichloropropene	ug/l	1/Month[2]	1/Quarter
Dieldrin	ug/l	1/Month[2]	1/Quarter
2,4-dinitrotoluene	ug/l	1/Month[2]	1/Quarter
1,2-diphenylhydrazine	ug/l	1/Month[2]	1/Quarter
Halomethanes[6]	ug/l	1/Month[2]	1/Quarter
Heptachlor	ug/l	1/Month[2]	1/Quarter
Heptachlor Epoxide	ug/l	1/Month[2]	1/Quarter
Hexachlorobenzene	ug/l	1/Month[2]	1/Quarter
Hexachlorobutadiene	ug/l	1/Month[2]	1/Quarter
Hexachloroethane	ug/l	1/Month[2]	1/Quarter
Isophorone	ug/l	1/Month[2]	1/Quarter
N-nitrosodimethylamine	ug/l	1/Month[2]	1/Quarter
N-nitrosodi-N-propylamine	ug/l	1/Month[2]	1/Quarter
N-nitrosodiphenylamine	ug/l	1/Month[2]	1/Quarter
PAHs[7]	ug/l	1/Month[2]	1/Quarter
PCBs[8]	ug/l	1/Month[2]	1/Quarter
TCDD equivalents[9]	ug/l	1/Month[2]	1/Quarter
1,1,2,2-tetrachloroethane	ug/l	1/Month[2]	1/Quarter
Tetrachloroethylene	ug/l	1/Month[2]	1/Quarter
Toxaphene	ug/l	1/Month[2]	1/Quarter
Trichloroethylene	ug/l	1/Month[2]	1/Quarter
1,1,2-trichloroethane	ug/l	1/Month[2]	1/Quarter
2,4,6-trichlorophenol	ug/l	1/Month[2]	1/Quarter
Vinyl Chloride	ug/l	1/Month[2]	1/Quarter

[1] Acute toxicity and chronic toxicity shall be determined as specified in section IV of this MRP.

[2] If the pollutant is not detected in the effluent for six consecutive months, the monitoring frequency for this pollutant may be reduced to once per quarter. Upon detection in the effluent, the monitoring frequency shall return to monthly.

[3] Hexachlorocyclohexane (HCH) shall be reported as the sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.

[4] Chordane shall be reported as the the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[5] DDT shall be reported as the sum of 4,4-DDT; 2,4-DDT; 4,4-DDE; 2,4-DDE; 4,4-DDD; and 2,4-DDD.

[6] Halomethanes shall be reported as the sum of bromoform, bromomethane, and chloromethane.

[7] PAHs shall be reported as the sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene and pyrene.

[8] PCBs shall be reported as the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

[9] TCDD equivalents shall be reported as 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

5. Effluent Monitoring – For Discharges That Do Not Require Treatment to Comply With Effluent Limitations

For discharges that do not require treatment to comply with effluent limitations, the Discharger shall monitor the discharge for the parameters specified in Table E-7 below, unless such monitoring is determined by the San Diego Water Board to be technologically or economically infeasible based on site-specific considerations. In that event, monitoring shall be conducted as specified in the NOA.

Table E-7. Effluent Monitoring for Discharges that do not Require Treatment to Meet Effluent Limitations

Parameters	Units	Monitoring Frequency Based on Average Monthly Flowrate	
		≥100,000 gpd	<100,000 gpd
Flow	MGD	1/week	1/Month
Settleable Solids	ml/L	1/6-Months	1/6-Months
Total Suspended Solids	mg/L	1/6-Months	1/6-Months
Turbidity	NTU	1/Month	1/Month
Chronic Toxicity[1]	Pass/Fail	1/Year	1/Year
pH	s.u.	1/Month	1/Month

[1] Chronic toxicity shall be determined as specified in section IV of this MRP.

III. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Discharges to Inland Surface Waters, Bays, Lagoons, and Estuaries

Whole effluent toxicity (WET) refers to the overall aggregate toxic effect of an effluent measured directly by an aquatic toxicity test(s). The control of WET is one approach this Order uses to control the discharge of toxic pollutants. WET tests evaluate the 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, and antagonistic toxicity effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3)

variability in bioavailability of the chemicals in the effluent.

Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

- Does the effluent comply with permit effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?
- If the effluent does not comply with permit effluent limitations for toxicity, are unmeasured pollutants causing risk to aquatic life?
- If the effluent does not comply with permit effluent limitations for toxicity, are pollutants in combinations causing risk to aquatic life?

1. Chronic Toxicity

a. Effluent Limitation

i. The MDEL for chronic toxicity is exceeded and a violation will be flagged when a toxicity test results in a "Fail" in accordance with the TST approach and the percent effect is greater than or equal to 0.50.

ii. A median monthly effluent limitation is exceeded and a violation will be flagged when the median results of three independent toxicity tests, conducted within the same calendar month, and analyzed using the TST (i.e., two out of three) is a "Fail".

iii. The determination of "Pass" or "Fail" at the IWC of 100 percent effluent is determined using the TST approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003).

Pass

A test result that rejects the null hypothesis (Ho) below is reported as "Pass" in accordance with the TST approach:

Ho: Mean response (100 percent effluent) ≤ 0.75 x Control mean response

Fail

A test that does not reject the null hypothesis above is reported as "Fail" in accordance with the TST approach.

Percent Effect

The percent effect at the IWC is calculated for each chronic toxicity test result using the following equation:

$$\% \text{ Effect at IWC} = \frac{Mean\ Control\ Response - Mean\ IWC\ Response}{Mean\ Control\ Response}\ x\ 100$$

b. Species and Test Methods

The Discharger shall conduct chronic toxicity on a representative sample which shall include one vertebrate, one invertebrate and one aquatic plant during the first required monitoring period.

The Discharger shall follow the methods for chronic toxicity tests as established in Code of Federal Regulations, title 40, section 136.3. The U.S. Environmental Protection Agency (U.S. EPA) method manuals referenced therein include *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater*

Organisms, Fourth Edition (EPA-821-R-02-013), and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition* (EPA-821-R-02-014). Additional methods for chronic toxicity monitoring are outlined in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition* (EPA-600-R- 95-136).

For discharges to marine and estuarine waters, the Discharger shall conduct a static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01); a static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and a static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, (Embryo-larval Development Test Method). For discharges to fresh water surface water, the Discharger shall conduct a static renewal toxicity test with one vertebrate, one aquatic plant, and one invertebrate species.

If laboratory-held cultures of the topsmelt, *Atherinops affinis*, are not available for testing, then the Discharger shall conduct a static renewal toxicity test with the inland silverside, *Menidia beryllina* (Larval Survival and Growth Test Method 1006.01), found in the third edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms* (EPA-821-R-02-014,2002; Table IA, 40 CFR part 136). Additional species may be used by the Discharger if approved by the San Diego Water Board.

All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before the conclusion of sample collection and test initiation.

c. Reporting

The Discharger shall report the results of reasonable potential analysis, species sensitivity screenings, and routine toxicity tests to the San Diego Water Board as either a “Pass” or a “Fail” at the IWC, in accordance with the TST approach and provide the calculated percent effect at the IWC.

d. Chronic Toxicity Exceedance Follow-up Action

A chronic toxicity test result during routine monitoring indicating a “Fail” with a percent effect at or above 0.50 is an exceedance of the chronic toxicity limitation. The Discharger shall:

i. Implement corrective actions to identify and abate the source of toxicity within 24 hours from the time the Discharger becomes aware of the exceedance.

ii. Conduct an additional chronic toxicity test within two weeks of being notified of the failed test results. If the follow-up test results in a “Pass”, no further action is required. If the follow-up test results in a “Fail” at a percent effect greater than or equal to 0.25, the Discharger shall conduct accelerated monitoring every 2 weeks over a 6 week period. All toxicity tests conducted during an accelerated monitoring schedule shall, at a minimum, include the IWC and four additional concentrations. The additional effluent concentrations should provide useful information regarding the intensity and persistence of the toxic effect(s).

iii. If one or more of the accelerated tests results in a “Fail” with a percent effect equal to or greater than 0.25, the Discharger shall implement an approved TRE Work Plan as specified in section IV.D of this MRP. The requirement for a TRE may be waived by the San Diego Water Board on a case-be-case basis if implementation of a

previously approved TRE Work Plan is already underway for the sampled discharge point.

B. Discharges to the Pacific Ocean

1. Acute Toxicity

a. Species and Test Methods

Acute toxicity testing shall be performed using either a marine fish or invertebrate species in accordance with the procedures established by the U.S. EPA 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).

b. Reporting

The Discharger shall report the results of reasonable potential analyses and routine toxicity tests to the San Diego Water Board as TUa, as defined in the Ocean Plan and in the formula below. Compliance with the acute toxicity effluent limitation shall be determined using the following formula:

TUa = 100 / 96-hour LC_{50}

where: the LC_{50} is the percent waste giving 50 percent survival of test organisms.

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 effluent. If S is greater than 99 percent, TUa shall be reported as zero.

c. Acute Toxicity Exceedance Follow-up Action

An acute toxicity test result during routine monitoring greater than 0.3 TUa is an exceedance of the acute toxicity limitation. The Discharger shall:

i. Implement corrective actions to identify and abate the source of toxicity within 24 hours from the time the Discharger becomes aware of the exceedance.

ii. Conduct an additional acute toxicity test within two weeks of being notified of the failed test results. If the follow-up test results in are below 0.3 TUa, no further action is required. If the follow-up test is greater than 0.3 TUa, the Discharger shall implement an approved TRE Work Plan as specified in section IV.D of this MRP. The requirement for a TRE may be waived by the San Diego Water Board on a case-by-case basis if implementation of a previously approved TRE Work Plan is already underway for the sampled discharge point.

2. Chronic Toxicity

a. Species and Test Methods

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 Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPAl600/R-951136, 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 during the first monitoring event after authorization to discharge under this Order. The screening period shall

consist of a minimum of one test using a minimum of three test species with approved test protocols from the Ocean Plan. Repeat screenings and/or screening periods may be utilized by the Discharger if necessary to identify the most sensitive species. The test species shall include a fish, an invertebrate, and an aquatic plant identified from Table E-7. After the screening period, the most sensitive test species shall be used for routine monitoring during the permit cycle. Control and dilution water should be lab water as appropriate. If 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-8. Approved Test for Chronic Toxicity (Ocean Plan)

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
shrimp, *Homesimysis costata*	percent survival; growth	1	a, c
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.

[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. U.S. EPA 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. U.S. EPA 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.

b. Reporting

The Discharger shall report the results of RPA, species sensitivity screenings, and routine toxicity tests to the San Diego Water Board as TUc, as defined in the Ocean Plan and in the formula below. Compliance with the chronic toxicity effluent limitation for the Pacific Ocean shall be determined using the following formula:

TUc = 100/NOEL

Where the no observed effect level (NOEL) is expressed as the maximum percent effluent or receiving water that causes no observed effect on a test organism.

c. Chronic Toxicity Exceedance Follow-up Action

A chronic toxicity test result during routine monitoring greater than 1 TUc is an exceedance of the chronic toxicity limitation. The Discharger shall do the following:

i. Implement corrective action to identify and abate the source of toxicity within 24 hours from the time the Discharger becomes aware of the exceedance.

ii. Conduct an additional chronic toxicity test within two weeks of being notified of the effluent limit exceedance. If the follow-up test results are less than or equal to 1 TUc no further action is required. If the follow-up test results are greater than 1 TUc, the Discharger shall conduct accelerated monitoring every 2 weeks over a 6 week period.

iii. If one or more of the accelerated test results exceed 1 TUc, the Discharger shall implement an approved TRE Work Plan as specified in section IV.D of this MRP. The requirement for a TRE may be waived by the San Diego Water Board on a case-by-case basis if implementation of a previously approved TRE Work Plan is already underway for the sampled discharge point.

C. Quality Assurance (QA)

Quality assurance (QA) measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified as follows:

1. Effluent dilution water and control water should be prepared and used as specified in the test methods manuals, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition* (EPA-821- R-02-012) and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPAl600/R-951136, 1995). If the dilution water is different from test organism culture water, then a second control using culture water shall also be used.

2. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same test conditions (e.g., same test duration, etc.).

3. All multi-concentration reference toxicant test results must be reviewed and reported according to U.S. EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing* (40 CFR part 136) (EPA 821-B-00-004, 2000).

4. If either the reference toxicant or effluent toxicity tests do not meet all test acceptability criteria in the test methods manual, then the Discharger shall resample and retest within 14 days.

D. Toxicity Reduction Evaluation (TRE)

1. TRE Work Plan Submittal. The Discharger shall prepare and submit a TRE Work plan to the San Diego Water Board no later than 30 days from the time the Discharger becomes aware that a TRE work plan is required by section IV.A or IV.B of this Order.

2. TRE Work Plan. The TRE Work Plan shall be in conformance with the U.S. EPA manual "Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/60012-88/070, 1989)."

The TRE Work Plan shall include the following information:

a. A description of the actions to be undertaken by the Discharger to investigate, identify, and correct the causes of toxicity;

b. If the MDEL noncompliance has not been corrected, the amount of time it is expected to continue;

c. A description of the steps taken or planned to reduce, eliminate and prevent recurrence of the MDEL noncompliance; and

d. A schedule for completion of all activities and submission of a final report.

3. **TRE Work Plan Implementation**. The Discharger shall implement the TRE Work Plan unless otherwise directed in writing by the San Diego Water Board. The Discharger shall comply with any additional conditions set by the San Diego Water Board.

4. **TRE Progress Reports**. The Discharger shall prepare and provide written semiannual progress reports that: (1) describe the actions that have been taken toward achieving compliance with the acute or chronic toxicity limitation for the previous six months; (2) describe all activities including, data collection and other field activities which are scheduled for the next year and provide other information relating to the progress of work; (3) identify any modifications to the compliance plans that the Discharger proposed to the San Diego Water Board or that have been approved by San Diego Water Board during the previous six months; and (4) include information regarding all delays encountered or anticipated that may affect the future schedule for completion of the actions required to attain compliance with the limitation, and a description of all efforts made to mitigate those delays or anticipated delays. These progress reports shall be submitted to the San Diego Water Board by the (15th) day of June and December of each year following the adoption of this Order. Submission of these progress reports shall continue until compliance with the limitation is achieved.

5. **Toxicity Identification Evaluation (TIE)**. Based upon the magnitude and persistence of the acute and chronic toxicity, the Discharger may initiate a Toxicity Identification Evaluation (TIE) as part of a TRE to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91 1003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase 1/ Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase 1/1 Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); *and Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). If a TIE is undertaken, the Discharger shall prepare and submit a work plan to the San Diego Water Board containing the following elements and comply with any conditions set by the Board:

a. Criteria for initiating a TIE on a sample;

b. Roles and responsibilities of the team conducting the TIE;

c. Study design, sample treatments, and chemical analysis;

d. Data evaluation and communication;

e. Follow-up actions; and

f. A schedule for completion of all activities and submission of a final report.

E. Additional Reporting of Toxicity Monitoring Results

1. The Discharger shall submit a full laboratory report for all toxicity testing as an attachment to the monitoring report. The laboratory report shall contain: the toxicity test results; the dates

of sample collection and initiation of each toxicity test; all results for effluent parameters monitored concurrently with the toxicity test(s).

2. The Discharger shall provide the actual test endpoint responses for the control (i.e., the control mean) and the IWC (i.e., the IWC mean) for each toxicity test to facilitate the review of test results and determination of reasonable potential for toxicity by the permitting authority.

3. The Discharger shall notify the San Diego Water Board in writing within 14 days of receipt of any test result with an exceedance of the toxicity limit. This notification shall describe actions the ischarger has taken or will take to investigate, identify, and correct the causes of toxicity; the status of actions required by this permit; and schedule for actions not yet completed; or reason(s) that no action has been taken.

IV. RECEIVING WATER MONITORING REQUIREMENTS

The receiving water monitoring requirements set forth below are designed to measure the effects of the groundwater extracton discharge on the receiving waters. The receiving water monitoring program is intended to answer the following questions:

- Does the receiving water meet water quality standards?
- Are the receiving water conditions getting better or worse over time?
- What is the relative contribution of the Facility discharge to pollution in the receiving water

A. Sample Collection

1. The Dischargers shall obtain an upstream sample of the receiving water if the discharge is to a river or stream; or from an area unaffected by the discharge for other receiving waters, and analyze the sample for turbidity and report the results monthly.

2. For discharges to surf zones within the Pacific Ocean, in lieu of obtaining turbidity samples in unaffected areas, the Discharger shall submit a monthly report describing (e.g., color, extent, duration, etc.) any turbidity plumes caused by the discharge.

3. Dischargers to Chollas Creek shall monitor once a year directly upstream and approximately 100 feet downstream of the discharge location for total hardness, expressed as calcium carbonate CaCO3, copper, lead, and zinc. All metals shall be reported as total recoverable metals.

4. If a representative sample cannot be obtained upstream of the proposed discharge location, the Discharger shall obtain the sample 100 feet downstream within 100 feet of the proposed discharge location. If the receiving water is comprised entirely of effluent, the Discharger may analyze the effluent for hardness in lieu of the receiving water.

5. The San Diego Water Board may increase receiving water monitoring requirements in the NOA on a case-by-case basis. Additional receiving water monitoring for individual discharges may be required, where necessary, to demonstrate that during the term of the discharge, applicable surface water quality objectives are being maintained.

V. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. The Discharger shall report all instances of noncompliance at the time monitoring reports are submitted.

B. Self-Monitoring Report (SMR) Submittal

1. At any time during the term of this Order, the State or San Diego Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program web site (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS web site provides additional directions for SMR submittal in the event there will be service interruption for electronic submittal..

   SMRs must be signed and certified as required by the Standard Provisions (Attachment D). The Discharger shall maintain sufficient staffing and resources to ensure SMR submittals are complete and timely. This includes provision for training and supervision of individuals on how to prepare and submit SMRs.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections II through V. The Discharger shall submit monthly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. 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.

3. Monitoring periods and SMR submittals for all required monitoring shall be completed according to the following schedule:

Table E-9. Monitoring Periods and Reporting Schedule

Sampling Frequency/ Report Type	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Daily Weekly Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	By the 30th day of the following month
Quarterly	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	April 30 July 30 October 30 January 30
Semiannual (once every 6 Months)	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	July 30 January 30
Annual	January 1 following (or on) permit effective date	January 1 through December 31	March 1

4. **Report Protocols.** The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR part 136.

   The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following 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 reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detectable, but Not Quantified", or DNQ. The estimated chemical concentration of the sample shall also be reported.

For purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. 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. The Discharger shall 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.

5. **Compliance Determination.** Compliance with effluent limitations for reportable pollutants shall be determined using sample reporting protocols defined above and in 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 Minimum Level (ML).

6. **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 "Detected, but Not Quantified" (DNQ) or "Not Detected" (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.

7. **Violations.** The SMRs shall clearly identify any violations of this Order 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 violations of this Order.

8. **Report Format**. The SMR shall be formatted in accordance with the following requirements:

   a. All reported data shall be arranged in a tabular format. The data shall be summarized to clearly illustrate whether the discharge is in compliance with the effluent limitations of

this Order. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and 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.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the Order as specifed in section B.7 above. All regulatory documents, submissions, materials, and correspondence that are normally submitted as hard copies shall be converted to a searchable Portable Document Format (PDF). Data may be submitted in Excel spreadsheets. Documents that are less than 50 MB should be emailed to SanDiego@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the address listed above.

c. SMRs must be submitted to the San Diego Water Board, signed and certified as required by the Standard Provisions of this Order (Attachment D, section V.B), to the address listed below:

California Regional Water Quality Control Board, San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108
Attn: Groundwater Extraction to San Diego Region
Core Regulatory Unit
Self Monitoring Report

C. Annual Summary of Monitoring Data

If the duration of discharge is six months or more, the Discharger shall submit a summary of monitoring data for the previous year to the San Diego Water Board prior to March 1st of each year. The annual report shall contain both tabular and graphical summaries of the previous year's data.

D. Report of Discharge Termination

When the groundwater extraction discharge is terminated, the Discharger is required under section II.F of this Order to submit a written request, referred to as a Notice of Termination (NOT), to the San Diego Water Board stating the termination date of the discharge and requesting termination of enrollment.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II.C of the Order, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) incorporates this fact sheet as findings of the San Diego Water Board supporting the issuance of this Order. This fact sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. DISCHARGE INFORMATION

A. Introduction

This Order is an NPDES Order that regulates groundwater extraction discharges to surface waters within the San Diego Region. Groundwater extraction discharges regulated under this Order include untreated and treated extracted groundwater from groundwater control systems employed in construction dewatering projects, foundation dewatering projects, trench and ditch dewatering projects, storage tank removal projects, monitoring wells, groundwater remediation projects, permanent[1] groundwater drainage and seepage control projects to surface waters, and other similar activities. Groundwater extraction discharges regulated under this Order are comprised solely of groundwater that has been determined by the San Diego Water Board, through a reasonable potential analysis, to not adversely affect beneficial uses of the receiving waters when properly treated and managed through best management practices pursuant to the terms and condtions of this Order. Groundwater extraction discharges associated with a specfic project regulated under this Order may be single discharges at one identified location or multiple groundwater discharges at multiple locations to waters of the U.S. within the San Diego Region.

Title 40 of the Code of Federal Regulations (40 CFR) section 122.28 provides for the issuance of general permits to regulate discharges of waste which result from similar operations, are the same type of waste, require the same effluent limitations, requires similar monitoring, and are more appropriately regulated under a general permit rather than individual permits. Existing and proposed discharges of groundwater extraction waste to waters within the San Diego Region from groundwater control systems employed in construction dewatering projects, foundation dewatering projects , trench and ditch dewatering projects, storage tank removal projects, monitoring wells, groundwater remediation projects, permanent groundwater drainage and seepage control projects to surface waters and other similar activities: 1) result from similar operations (all involve extraction and discharge of groundwater), 2) are the same type of waste (all are groundwater), 3) require similar effluent limitations for the protection of beneficial uses, 4) require the issuance of a permit in a short time period because the nature of most projects is short term, 5) require similar monitoring, and 6) are more appropriately regulated under a general permit rather than an individual permit.

Discharges of groundwater to receiving waters within the San Diego Region that obtain coverage under this Order are required to comply with the effluent limitations, discharge prohibitions, receiving water limitations and monitoring requirements contained in this Order and additional requirements established in a Notice of Applicability (NOA) in a manner that protects the beneficial uses of the receiving waters.

[1]The permanent groundwater extraction discharge from the One America Plaza dewatrering system in the City of San Diego, California that was previously regulated under Order No. R9-2007-0034 is not subject to this exclusion and is eligible for coverage under this Order, subject to the terms and conditons of this Order.

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B. Background

In 1972, the Federal Water Pollution Control Act, currently referred to as the federal Clean Water Act (CWA), was amended to provide that the discharge of pollutants to waters of the U.S. from any point source is prohibited, unless the discharge is in compliance with a NPDES permit. The federal regulations allow authorized states to issue either general permits or individual permits to regulate discharges of pollutants to waters of the U.S. On April 23, 1990, the California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) issued a general permit for the temporary discharge of groundwater extraction waste discharges to San Diego Bay (Order No. 90-31). Order No. 90-31 has been reissued three times on May 16, 1995 (Order No. 95-25), June 14, 2000 (Order No. 2000-90), and October 10, 2007 (Order No. R9-2007-0034). In addition, on January 28, 1991, the San Diego Water Board issued a general permit for groundwater remediation and dewatering wastes discharges to surface waters within the San Diego Region except for San Diego Bay (Order No. 91-10). Order No.91-10 was reissued three times on June 13, 1996 (Order No. 96-41), October 10, 2001 (Order No. 2001-96), and March 12, 2008 (Order No. R9-2008-0002).

Due to the similarities in discharges and operations addressed in each general permit (groundwater extraction discharges for remediation, and various types of dewatering projects), and to provide consistent requirements throughout the San Diego Region for similar discharges, and reduce the administrative burden of two general permits for similar facilities/operations, the San Diego Water Board has elected to issue a single general permit for the discharge of groundwater extraction and dewatering to all surface waters within the San Diego Region. This single Order addresses both temporary discharges of groundwater extraction to the San Diego Bay[2], and discharges of groundwater remediation and dewatering wastes either temporary or permanent to all other receiving waters within the San Diego Region.

Order No. 2000-90 regulated temporary groundwater extraction discharges to San Diego Bay and prohibited permanent groundwater extraction discharges. However, Order No. 2000-90 excluded three pre-existing permanent groundwater extraction discharges from the prohibition that were regulated under Order No. 95-25 when Order No. 2000-90 was adopted. The three groundwater extraction discharges were the City of San Diego, San Diego Convention Center permanent dewatering system, the Embassy Suites Hotel permanent dewatering system, and the One America Plaza permanent dewatering system. On March 12, 2003, the City of San Diego was issued an individual NPDES permit for the City of San Diego, San Diego Convention Center permanent dewatering system discharge. Order No. R9-2007-0034 continued to regulate the Embassy Suites Hotel and One America Plaza permanent dewatering system discharges and to exclude them from the prohibition against permanent groundwater extraction discharges to San Diego Bay.

As of the date of adoption of this Order, the only existing permanent groundwater extraction discharge to San Diego Bay regulated under Order No. R9-2007-0034 is the One America Plaza permanent dewatering system discharge and it may continue to be regulated under the terms and conditons of this Order or alternatively may be regulated under an individual NPDES permit.

[2] The permanent groundwater extraction discharge from the One America Plaza dewatering system in the City of San Diego, California that was previously regulated under Order No. R9-2007-0034 is not subject to this exclusion and is eligible for coverage under this Order, subject to the terms and conditons of this Order.

C. Discharge Description

Underground excavation projects often require extraction of groundwater on a temporary or permanent basis to maintain dry conditions at the site or reduce structure uplift pressures. Depending on soil types and site history, extracted groundwater may contain pollutants from a variety of sources, including but not limited to: hydrogen sulfide from decomposing organic materials; petroleum hydrocarbons from leaking underground storage tanks and fuel lines; solvents and metals from industrial practices that historically led to discharges or spills; bacteria and viruses from sewage wastewater collection system leakage; and nutrients, fertilizer (phosphorus and nitrogen compounds), herbicides, and pesticides from runoff.

When groundwater is extracted from wells or sumps, as occurs during some dewatering schemes, hydraulic gradients are generated, which draws the groundwater toward the well or sump. If dewatering is carried out on or near a site which has a historic legacy of groundwater pollution, the hydraulic gradients may cause pollutants from the existing contamination to move and migrate toward the dewatering system. The pollutants may emerge in the groundwater and the subsequent discharge of the groundwater, without adequate treatment to reduce pollutant levels can adversely affect beneficial uses of the surface receiving waters.

In addition to construction related groundwater extraction discharges, groundwater remediation projects may also require the discharge of treated extracted groundwater to surface waters. The extraction of contaminated groundwater with subsequent treatment to reduce pollutant levels is a widely used ground water remediation technology. In this process contaminated ground water is brought to the surface and is coupled with physical, biological, or chemical treatment processes to reduce pollutant levels prior to discharge to a surface water body.

D. Summary of Previous Requirements

Dischargers regulated under Order Nos. R9-2007-0034 and R9-2008-0002 as well as new similarly situated Dischargers are expected to seek coverage under this Order.

1. Order Nos. R9-2007-0034 and R9-2008-0002 established water quality-based effluent limitations (WQBELs) for extracted groundwater discharges to inland surface waters, bays and harbors (excluding San Diego Bay), San Diego Bay (and tributaries), lagoons and estuaries, and the surf zone of the Pacific Ocean. The effluent limitations were based on applicable water quality criteria/objectives, as specified in the following applicable State water quality control plans:
   a. The California Toxics Rule (CTR) and National Toxics Rule (NTR) as specified in the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005)(SIP);
   b. The Water Quality Control Plan for the San Diego Basin (Basin Plan) (1995);
   c. The Water Quality Control Policy for the Enclosed Bays and Estuaries of California; and
   d. The Water Quality Control Plan, Ocean Waters of California (Ocean Plan) (2005).
2. Order Nos. R9-2007-0034 and R9-2008-0002 also contained the following discharge prohibitions:
   a. The discharge of wastewater at a location, or in a manner different from that described in section I, the NOI, or the NOA is prohibited.
   b. The discharge of wastewater shall not create or cause conditions of nuisance or pollution.

c. The discharge shall not cause, have a reasonable potential to cause, or contribute to an in-stream excursion above any applicable criterion promulgated by U.S. EPA pursuant to section 303 of the CWA, or water quality objective adopted by the State or San Diego Water Boards.

d. The discharge of waste to areas designated by the State Water Board as being of special (ASBS) biological significance is prohibited. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas.

e. The discharge of groundwater extraction wastes from a specific site in excess of the flowrate specified in the NOA from the San Diego Water Board is prohibited, unless the enrollee obtains a revised discharge NOA authorizing an increased flowrate.

f. The addition of pollutants to extracted groundwater to be discharged to surface waters within the San Diego Region/San Diego Bay is prohibited. The only exception to this prohibition is that chemicals may be added to extracted groundwater to control biofouling in treatment systems, provided that extracted groundwater discharged meets the effluent limitations established for such chemicals, and in the discharge NOA issued by the San Diego Water Board.

g. The discharge of groundwater extraction wastes to surface waters within the San Diego Region is prohibited unless after receiving a complete NOI, the Regional Board has provided the Discharger with a written NOA identifying the discharge subject to waste discharge requirements.

h. Discharges of wastes to San Diego Bay from permanent groundwater extraction operations are prohibited except for permanent dewatering systems for the Embassy Suites Hotel and One America Plaza until such time that these Dischargers receive an individual permit (Order No. R9-2007-0034 only).

i. The discharge of groundwater extraction wastes from a groundwater remediation operation after the date groundwater has been remediated to the satisfaction of the San Diego Water Board is prohibited.

j. Compliance with Discharge Prohibitions contained in the Basin Plan is also required as a condition.

k. Discharges of wastes in a manner, or to a location which have not been specifically regulated are prohibited.

l. The discharge of any radiological, chemical, or biological warfare agent, or high level radiological waste is prohibited.

m. The dumping or deposition, from shore, of oil, garbage, trash, or other solid municipal, industrial, or agricultural waste directly into waters subject to tidal action or adjacent to waters subject to tidal action in any manner which may permit it to be washed into waters subject to tidal action is prohibited.

n. The dumping or deposition of chemical agents or explosives into waters subject to tidal action is prohibited.

o. The discharge of copper within extracted groundwater to the Shelter Island Basin watershed or the Shelter Island Basin within San Diego Bay is prohibited (Order No. R9-2007-0034 only).

p. The discharge of diazinon from extracted groundwater to Chollas Creek or from Chollas Creek to San Diego Bay is prohibited (Order No. R9-2007-0034 only).

II. PERMIT INFORMATION

A. Eligibility Criteria

Discharges covered by this Order are limited to discharges of extracted groundwater from groundwater control systems employed in construction dewatering projects, foundation dewatering projects, trench and ditch dewatering projects, storage tank removal projects, monitoring wells, groundwater remediation projects, permanent groundwater drainage and seepage control projects to surface waters other than San Diego Bay and other similar activities discharging to surface waters.

Permanent groundwater extraction discharges to the San Diego Bay are not eligible for coverage under this Order, with the exception of the One America Plaza permanent dewatering system. Permanent groundwater extraction discharges for the purposes of this Order refers to long term discharges from groundwater control systems for completed structures needed to lower groundwater levels, reduce hydrostatic pressure or control infiltration and leakage of groundwater into below ground completed structures.

Order No. 2000-90 established requirements that recognized the capacity of San Diego Bay to assimilate pollutants is limited. In order to protect the beneficial uses of San Diego Bay waters from excessive loading of pollutants that would be a result of increasing numbers of waste discharges to San Diego Bay, groundwater extraction waste discharges to San Diego Bay from permanent operations was prohibitied. This Order retains the limited exception for One America Plaza to obtain coverage to continue permanent discharges of dewatering wastes. The capacity of San Diego Bay to assimilate pollutants continues to be limited and the continued prohibition of discharges from permanent groundwater extraction operations to San Diego Bay under this Order will reduce the potential number and duration of discharges to San Diego Bay as in accordance with underlying principles of the federal Clean Water Act (Section 101(a)(1)) and the Water Quality Control Policy for Enclosed Bays and Estuaries of California.

Dischargers eligible for coverage under this Order must meet the following criteria:

1. The groundwater extraction discharge must be to surface waters within the San Diego Region, as set forth in secton I of this Order. Groundwater extraction discharges include untreated or treated extracted groundwater from groundwater control systems employed in construction dewatering projects, foundation dewatering projects, trench and ditch dewatering projects, storage tank removal projects, monitoring wells, groundwater remediation projects, permanent groundwater drainage and seepage control projects to surface waters other than San Diego Bay[3] and other similaractivities.
2. The groundwater extraction discharge must be comprised solely of groundwater that has been determined by the San Diego Water Board through a RPA to not adversely affect beneficial uses of the receiving waters when properly treated andmanaged through best management practices (BMPs) pursuant to the terms and condtions of this Order.
3. Groundwater extraction discharges regulated under this Order may be single discharges at one identified location or multiple groundwater discharges at multiple locations to surface waters throughout the San Diego Region.

[3] Permanent groundwater extraction discharges from groundwarter extraction activities at One America Plaza in the City of San Diego, California that were previously regulated under Order No. R9-2007-0034 are not subject to this exclusion and are eligible for coverage under this Order, subject to the terms and conditons of the Order.

This Order does not regulate any of the following groundwater extraction discharges:

1. Groundwater extraction discharges that are not within the scope of this Order as described in section I and/or are not authorized by a NOA issued by the San Diego Water Board Executive Officer;
2. Permanent groundwater extraction discharges to San Diego Bay and its tributaries under tidal influence except as provided in section I of this Order;
3. Passive discharges of groundwater that flow by gravity from footing drains, foundation drains, building perimeter drains, and other similar groundwater control sources;
4. Direct groundwater extraction discharges into areas designated by the State Water Resources Control Board as an ASBS;
5. Groundwater extraction discharges that are comingled with other non-groundwater wastewater flows or types of waste;
6. Groundwater extraction discharges determined by the San Diego Water Board to be sufficiently regulated by another NPDES permit including but not limited any one of the following:
    a. Order No.2006-0008-DWQ, NPDES No. CAG990002, *General National Pollutant Discharge Elimination System (NPDES) Permit For Discharges From Utility Vaults And Underground Structures To Surface Waters,* and any reissuance;
    b. Order No. R9-2013-0001, NPDES No. CAS0109266, *National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (MS4 Permit) ,* and any reissuance*;*
    c. Order No. 2012-0011-DWQ, NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Permit, Waste Discharge Requirements (WDRS) for State of California, Department of Transportation, and any reissuance;
    d. Order No.2014-0194-DWQ, NPDES No. CAG140001, *Statewide General National Pollutant Discharge Elimination System (NPDES) Permit For Drinking Water System Discharges To Waters of the United States,* and any reissuance; or
    e. Order No. R9-2013-0001-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 and Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), and any reissuance. The Discharger must have an established agreement with the Small MS4 Copermitee having jurisdiction to discharge into its MS4 and the San Diego Water Board must concur that the agreement provides sufficient regulation of the groundwater extraction discharge through the Small MS4 General Permit.
7. Groundwater extraction discharges in compliance with the the instructions of an On-Scene Coordinator pursuant to 40 CFR part 300 (*The National Oil and Hazardous Substances Pollution Contingency Plan*) or 33 CFR section 153.10(e) (Pollution by Oil and Hazardous Substances);
8. Groundwater extraction discharges into a sanitary sewer sytem leading to a federally, publically, or privately owned treatment works; or
9. Groundwater extraction discharges that do not discharge to waters of the U.S. or otherwise require an NPDES permit under federal law.

10. Groundwater extraction discharges from a post-construction single family residential home or lot, unless such a discharge has been determined to cause or contribute to a condition of pollution or nuisance. Such determination may be made by the San Diego Water Board or by the appropriate local agency with the San Diego Water Board's concurrence. In general, this Order's requirements for treatment, monitoring, and reporting are unnecessarily burdensome for a single family home owner who discharges low volumes of groundwater. Where necessary, these homeowners should be encouraged to retain, infiltrate, reuse, or evaporate the extracted groundwater, rather than discharging to waters of the U.S. The San Diego Water Board retains the discretion to require such a discharger to enroll in this Order if the discharge has the potential to cause or contribute to a condition of pollution or nuisance. Such determinations will be made on a case by case basis.

B. Notice of Intent (NOI)

The purpose of this Order is to facilitate regulation of discharges from groundwater extraction activities as described in section I of this Fact Sheet. To obtain coverage under this Order , the Discharger must submit a Notice of Intent (NOI) Form, a project map(s), an initial pollutant scan (Appendix C-1), and first annual fee. The NOI Form must be completed in accordance with the instructions and signed to be valid. Signing the certification on the NOI Form signifies that the Discharger intends to comply with the terms and conditions of this Order.

To obtain coverage under this Order the Discharger must submit the following information to the San Diego Water Board:

1. **NOI.** A completed NOI Form (Attachment C), with all specified attachments.
2. **Treatment Facility Certification Report.** If the groundwater extraction discharge will need treatment to comply with the effluent limitations, then the NOI must include a report describing and certifying the adequacy of each component of the treatment facilities prepared by a California licensed professional engineer, competent and proficient in the field pertinent to the report and qualified to prepare such report. The report shall also certify the following:
   - **a.** All treatment facility startup and operation instruction manuals are adequate and available to operating personnel;
   - **b.** Adequate treatment facility maintenance and testing (if treatment facilities are on "standby") schedules are included in the treatment facility operations manual;
   - **c.** Treatment facilities and appurtenances will be be fully operational, as designed prior to the commencement of discharge ; and
   - **d.** Influent and effluent sampling locations or ports are located in areas where samples representative of the waste stream to be monitored can be obtained.
   - **e.** The design engineer shall affix his/her signature and engineering license number to this certification report
3. **Disposal Alternative Analysis**. Consistent with section 2, Article X of the California Constitution, and section 275 of the CWC on preventing waste and unreasonable use of waters of the state, this San Diego Water Board encourages, wherever practical, water conservation and/or reuse of wastewater. To obtain coverage under this Order, the Discharger must first investigate the feasibility of a range of alternative disposal methods to the proposed extracted groundwater discharge to surface waters including reasons and conclusions as to why it is technically or economically infeasible to implement these alternative disposal methods. Alternative disposal methods include but are not limited to:

a. Collection and recycling of the extracted groundwater for a direct beneficial use, including landscape or agricultural irrigation, dust control, soil compaction during earthwork activities, or other appropriate uses in lieu of potable drinking water supplies;

b. Reinjection of the extracted groundwater to the subsurface;

c. Discharge of the extracted groundwater to an MS4 that employs low impact development practices or flows into storm water capture basins to recharge groundwater; and

d. Discharge of the extracted groundwater to a sanitary sewer system leading to a federally, publicly, or privately owned treatment works.

4. **MS4 Operator Notification**. Dischargers proposing to discharge extracted groundwater to an MS4 shall include with their NOI, documentation demonstrating that they have notified the MS4 operator at the point of proposed discharge into the MS4. This requirement encourages communication between Dischargers enrolled under this Order and local agencies responsible for MS4s in an effort to reduce misunderstandings and concerns over the types of discharges covered by this Order. Consistent with CWC section 13002 and 40 CFR section 122.5(c), this Order is not intended to affect any separate legal authority an MS4 operator may have to prohibit a discharge or to require the Discharger to obtain any permits or approvals from the MS4 operator before initiating discharges into the MS4.

5. **Reasonable Potential Analysis**. The results of a reasonable potential analysis described in Appendix C-1 of this Order provides direction to the Discharger and the San Diego Water Board for determining if a pollutant in the proposed groundwater extraction discharge causes, has the reasonable potential to cause, or contributes to an excursion above any applicable State water quality objective or federal water quality criteria in accordance with 40 CFR section 122.44 (d)(1)(iii).

6. **Monitoring and Reporting Program (MRP)**. A sampling, monitoring, and reporting program, as specified in section III.A of the MRP in Attachment E of this Order.

7. **Project Map**. A project map(s) that shows the essential features of the groundwater extraction system within the San Diego Water Board boundary, identifies all known groundwater contamination sites and plumes within a half mile of each groundwater extraction point to be used in the dewatering project, the corresponding surface water, and if discharging into a MS4, the storm drain to which water will be discharged.

8. **Supplemental Informaton**. Upon request, the Discharger must submit any additional information that the San Diego Water Board deems necessary to determine whether the discharge meets the criteria for coverage under this Order, and to prescribe an appropriate MRP.

9. **Application Fee**. Payment of the application fee, equal to the first annual fee, made payable to "SWRCB." The fee for enrollment under this Order is based on California Code of Regulations (CCR), title 23, division 3, chapter 9, Waste Discharge Reports and Requirements, article 1, Fees which is available at http://www.waterboards.ca.gov/resources/fees/#npdes.

   The NOI form is included in this Order as Attachment C. The NOI, including map(s), the application fee, and other attachments, must be submitted to the following address:

   San Diego Water Board

2375 Northside Drive, Suite 100
San Diego, CA 92108

Attn: Groundwater Extraction Permit
Source Control Regulation Unit
NOTICE OF INTENT

The San Diego Water Board is implementing a Paperless Office system to reduce our paper use. Please convert all submissions with attachments to a searchable Portable Document Format (PDF) and submit the documents on a compact disk.

C. Deadline for NOI Submittal

a. Existing Dischargers that were previously authorized to discharge under Order Nos. R9-2007-0034 and R9-2008-0002 must submit a complete NOI package; the NOI package must include all required attachments including the alternative disposal analysis and, if applicable, notification to the MS4 owner, to the San Diego Water Board by March 24, 2016. Existing Dischargers applying for coverage under this Order are also required to collect representative untreated groundwater sample(s) and conduct the reasonable potential analysis described in Appendix C-1 of this Order to provide direction to the Discharger for determining if a pollutant in the proposed groundwater extraction discharge causes, has the reasonable potential to cause, or contributes to an excursion above any applicable State water quality objective or federal water quality criteria in accordance with 40 CFR section 122.44 (d)(1)(iii). The Discharger must submit the NOI package to the San Diego Water Board by March 25, 2016, **or else risk losing permit coverage**. Existing discharges will be considered ineligible for regulation under this Order, if the analytical test results of any constituent other than the pollutants with effluent limitations in section IV of this Order exceeds the applicable water quality objective/criteria screening values described in Appendix C-1 to Attachment C of this Order.

b. New Dischargers, previously unregulated under Order No. R9-2007-0034 or Order No. R9-2008-0002, must file a complete NOI package at least 60 days before the proposed commencement of the discharge.

D. Failure to Submit an NOI for an Existing Discharge

A Discharger, regulated under Order No. R9-2007-0034 or Order No. R9-2008-0002 prior to adoption of this Order, failing to submit a complete NOI no later than nine months after adoption of this Order, will risk losing permit coverage and may be subject to an enforcement action, including assessment of administrative or judicial penalties, as allowed pursuant to applicable provisions of the CWA and the CWC including section 13261 thereof.

E. Coverage under this Order

1. Notice of Applicability (NOA)

Upon receipt of a complete NOI submittal as described in section I.B of this Order, the San Diego Water Board shall determine the applicability of this Order to the propsed groundwater extracton discharge. The NOI and each element thereof are subject to San Diego Water Board approval. If the discharge is eligible for coverage under this Order, the San Diego Water Board will issue a NOA, to the Discharger, authorizing the discharge under the terms and conditions of this Order. The NOA will prescribe specified monitoring and reporting requirements, and any other project specific requirements due to the site specific circumstances of the discharge. The San Diego Water Board may issue an NOA

and require a Discharger to comply with the conditions of this Order even if the Discharger has not submitted an NOI to be covered by this Order, as required in section II.B of this Order.

2. Notice of Discharge Commencement

New Dischargers must notify the San Diego Water Board of the time and date for commencement of the new groundwater extracton discharge(s) authorized under the NOA at least seven days prior to initiating a discharge.

3. Notice of Applicability (NOA) Modificaton

The Discharger may submit a written request for modification of an NOA to to the San Diego Water Board. The request for NOA modification shall include "Request for NOA Amendment" in the subject line, the Waste Discharge Identification Number (WDID) assigned to the Discharger in the original NOA, the name and address of the Discharger, all of the information the Discharger believes is necessary for the San Diego Water Board to evaluate the request for modification, and shall be signed and certified by the Discharger in accordance with the signatory requirements in Attachment D, Standard Provisions section V of this Order. A request for modification of an NOA does not require resubmittal of the entire NOA package, but the San Diego Water Board may ask for supplemental information as necessary to determine if the requested modification is appropriate. The submittal of a request by the Discharger for modification of the NOA does not stay any condition of this Order and the Discharger shall continue to comply with this Order and the NOA until further notice from the San Diego Water Board.

F. Notice of Exclusion (NOEX)

The San Diego Water Board may issue a Notice of Exclusion (NOEX), which denies coverage under this Order because the proposed groundwater extraction discharge is not covered within the scope of this Order, terminates permit coverage of an existing discharge for cause, or requires the Discharger to submit an application for an individual NPDES permit or, for discharges to land, WDRs. An NOEX will indicate that the discharge is not eligible for coverage under this Order and state the reasons why.

G. Notice of Termination (NOT)

To terminate coverage under this Order, the Discharger must submit a complete and accurate Notice of Termination (NOT), to the San Diego Water Board. The NOT provides notice that the Discharger has ceased the discharge of extracted groundwater associated with the groundwater control activities at the site under this Order. The Discharger's coverage under this Order will terminate on the date specified in a coverage termination acknowledgment notice issued by the San Diego Water Board and the Discharger will no longer be authorized to discharge extracted groundwater under this Order. The San Diego Water Board's coverage termination notice in no way prevents the Board from taking enforcement action for any violations of the Order by the Discharger.

Prior to receving the coverage termination notice the Discharger must continue to comply with the requirements of this Order including payment of any applicable fees and outstanding invoices and submittal of any required reports. The Discharger will also continue to be subject to enforcement action on any existing violations of this Order both prior to and after issueance of the coverage termination notice.

H. Change of Authorization

Eligible Dischargers already covered under other NPDES permits for groundwater extraction discharges may submit a complete NOI for coverage under this Order. Dischargers who submit a complete NOI under this Order are not required to submit an individual permit application. The San Diego Water Board may request additional information and may determine that a Discharger is not eligible for coverage under this Orderand should be regulated under an individual or other general NPDES permit or, for discharges to land, under WDRs. If the San Diego Water Board issues a separate NPDES permit or WDRs, then the applicability of this Order to the discharge is immediately terminated on the effective date of such NPDES permit or WDRs.

I. Transferring Ownership

The NOA authorizing coverage for the discharge of extracted groundwater under this Order for a specific groundwater control project is not transferable. In the event of any planned change in ownership of land or waste discharge facilities presently owned by the Discharger, the Discharger must notify the new succeeding owner, by letter 120 days prior to property transfer, of the of the obligation to apply for coverage under this Order for the extracted groundwater discharge. A copy of this notification shall be promptly submitted to the San Diego Water Board. Additionally, the Discharger must submit a NOT to the San Diego Water Board. The new succeeding owner or operator must submit a new NOI package applying for coverage under this Order prior to discharging extracted groundwater.

J. Basis for Fee

Section 2200 (Annual Fee Schedule) of title 23 of the CCR requires that all discharges subject to waste discharge requirements shall pay an annual fee.

K. Discharge Points and Receiving Waters

Groundwater extraction discharges associated with a specific project regulated under this Order may be single discharges at one identified location or multiple groundwater discharges at multiple locations to surface waters throughout the San Diego Region. The applicable receiving waters and discharge points must be identified in the completed NOI.

The San Diego Region has continuous and ephemeral rivers and streams, bays, estuaries, lagoons, and approximately 85 miles of Pacific Ocean coastline. No receiving waters covered under the terms and conditions of this Order have been designated as outstanding national resource waters by the State Water Board. However, Heisler Park Ecological Reserve, located in coastal waters near the City of Laguna Beach and the San Diego-La Jolla Ecological Reserve, and the San Diego Marine Life Refuge, located in coastal waters near La Jolla a community of the City of San Diego, have been designated an ASBS by the State Water Board. The Water Quality Control Plan for Ocean Waters of California (Ocean Plan) contains the following prohibitions applicable to ASBS:

> *"Waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas."*

This Order prohibits the discharge of extraction waste to these designated ASBS.

This Order contains effluent limitations which may require the application of ‘best available treatment economically achievable’ (BAT) for the removal of pollutants from discharges of extracted groundwater authorized by a NOA. This Order requires the Discharger to certify the adequacy of each component of treatment facilities or a contingency plan prior to initiating a discharge. The Discharger’s certification report must contain a requirement-by-requirement

analysis, based on accepted engineering practice, of how the contingency plan or process and physical design of the facilities will ensure compliance with this Order.

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 serves as WDRs pursuant to article 4, chapter 4, division 7 of the CWC (commencing with section 13260). This Order is also issued pursuant to section 402 of the CWA and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. States may request authority to issue general NPDES permits pursuant to 40 CFR section 122.28. On June 8, 1989, the State Water Resources Control Board (State Water Board) submitted an application to U.S. EPA requesting revisions to its NPDES Program in accordance with 40 CFR sections 122.28, 123.62, and 403.10. The application included a request to add general NPDES permit authority to its approved NPDES Program. On September 22, 1989, U.S. EPA, Region 9, approved the State Water Board's request and granted authorization for the State of California to issue general NPDES permits.

B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The San Diego Water Board adopted *Water Quality Control Plan for the San Diego Basin* (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 Basin Plan. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the San Diego Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Because of marine water influence in the potential receiving waters, total dissolved solids (TDS) levels may exceed 3,000 milligrams per liter (mg/L) for some receiving waters, and thereby meet an exception to State Water Board Resolution No. 88-63. The municipal and domestic supply beneficial use designation, therefore does not apply to receiving waters that exceed 3,000 mg/L of total dissolved solids for entities permitted under this Order.

   The Basin Plan identifies the following beneficial uses of surface waters in the San Diego Region to be protected (not all surface waters have all of the beneficial uses listed below):

   - Municipal and domestic supply (MUN);
   - Industrial service and process supply (PROC);
   - Preservation of rare, threatened
   - Migration of aquatic organisms (MIGR);
   - Commercial and sport fishing (COMM);
   - Spawning, reproduction, and/or

or Endangered species (BIOL);
- Navigation (NAV);
- Marine habitat (MAR);
- Contact water recreation (REC-1);
- Aquaculture (AQUA);
- Non-contact water recreation (REC-2);
- early development (SPWN);
- Preservation of areas of special biological significance (BIOL);
- Shellfish harvesting (SHELL);
- Estuarine Habitat (EST); and
- Wildlife Habitat (WILD).

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, 2009, and 2012. The State Water Board adopted the latest amendment on October 16, 2012, and it became effective on August 19, 2013. 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:

- Industrial water supply;
- Aesthetic enjoyment;
- Non-contact water recreation;
- Preservation of areas of special biological significance;
- Fish migration;
- Fish spawning;
- Navigation;
- Water contact recreation;
- Ocean commercial and sport fishing;
- Preservation and enhancement of rare and endangered species;
- Marine habitat;
- Shellfish harvesting; and
- Mariculture.

3. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

5. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the San Diego Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP implementation provisions for priority pollutant criteria promulgated by the U.S. EPA through the NTR and the CTR, and for priority pollutant

objectives established in the Basin Plan; monitoring requirements for 2,3,7,8-TCDD (tetrachlorodibenzo-p-dioxin)equivalents; and chronic toxicity control provisions.

6. **Alaska Rule.** On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 CFR section 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 U.S. EPA after May 30, 2000, must be approved by U.S. EPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by U.S. EPA.

7. **Antidegradation Policy.** 40 CFR section 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 68-16. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 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 section 131.12 and State Water Board Resolution 68-16. This Order meets the requirements of the federal and State antidegradation policies, as discussed in detail in section IV.D.2 of this Fact Sheet.

8. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict 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. This Order meets all anti-backsliding requirements.

9. **Monitoring and Reporting.** Federal regulations at 40 CFR section 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. sections 13267 and 13383 of the CWC authorize the San Diego Water Boards to require technical and monitoring reports. The MRP establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided as Attachment E.

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

The federal CWA requires states to identify and make a list of surface water bodies that are polluted. These water bodies, referred to in law as "water quality limited segments," do not meet water quality standards even after discharges of wastes from point sources have been treated by the minimum required levels of pollution control technology. States are required to compile the water bodies into a list, referred to as the "CWA Section 303(d) List of Water Quality Limited Segments" (303(d) List). States must also prioritize the water bodies on the list and develop action plans, called total maximum daily loads (TMDLs) to improve the water quality.

The San Diego Water Board has adopted TMDLs that have been approved by the State Water Resource Control Board Office of Administrative Law and by the U.S. EPA. The following TMDLs have been considered during the drafting of this Order and have been implemented for the appropriate receiving water:

- Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek) Indicator Bacteria TMDLs (Resolution No. R9-2010-0001);

- Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay Indicator Bacteria TMDLs (Resolution No. R9-2008-0027);
- Chollas Creek Copper, Lead, and Zinc TMDLs (Resolution No. R9-2007-0043);
- Rainbow Creek Nitrogen and Phosphorus TMDLs (Resolution No. R9-2005-0036);
- Shelter Island Yacht Basin Dissolved Copper TMDL (Resolution No. R9-2005-0019);
- Chollas Creek Diazinon TMDL (Resolution No. R9-2002-0123); and
- Los Penasquitos Lagoon Sediment TMDL (Resolution No. R9-2012-0033)

A summary of the applicable TMDLs is provided in Attachment B of this Order. All applicable TMDLs, with the exception of Resolution No. R9-2007-0043 (a concentration-based TMDL for copper, lead, and zinc in Chollas Creek), either prohibit the discharge of the applicable pollutants to the receiving water or establish a waste load allocations (WLAs) for discharges covered under this Order. As such, these TMDLs are implemented as Discharge Prohibitions III.I, III.J, III.K, and III.L of this Order.

Section IV of Attachment B, and section IV.C.5 of this Fact Sheet, discuss the application of WLA-based effluent limitations and receiving water monitoring for copper, lead, and zinc which have been established for discharges to Chollas Creek.

E. Other Plans, Polices and Regulations – Not Applicable

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 U.S. 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 section 122.44(a) requires that permits include applicable TBELs and standards; and 40 CFR section 122.44(d) requires that permits include WQBELs necessary to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

Discharge prohibitions contained in the Order are consistent with discharge prohibitions included in Order Nos. R9-2007-0034 and R9-2008-0002 (the previous Orders regulating the discharge of extracted groundwater), and discharge prohibitions necessary to implement applicable water quality plans and policies.

1. Discharge Prohibitions III.A, III.C, III.E, III.F, and III.G are based on 40 CFR section 122.21(1), duty to apply, and CWC section 13260, which requires filing an application and a Report of Waste Discharge before discharges may occur. Discharges not described in the permit application (NOI package), and subsequently not considered for coverage under this Order are prohibited.
2. Discharge Prohibition III.B is based on the requirements of the Ocean Plan and prohibits the discharge of wastes to areas designated as being of special biological significance.
3. Discharge Prohibition III.D minimizes the amount and types of pollutants that are discharged into receiving waters and is consistent with the requirements of Order Nos. R9-2007-0034 and R9-2008-0002.

4. Discharge Prohibition III.H implements the requirements of the Basin Plan, Ocean Plan, Estuaries Plan, and section 13050 of the CWC.

5. Discharge Prohibitions III.I, III.J, III.K, and III.L are based on the requirements of the Basin Plan, and implement TMDLs, as further discussed in Attachment B.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 CFR section 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 the Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR section 125.3. The CWA requires that TBELs be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitation guidelines (ELGs) representing the application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR section 125.3 authorize the use of BPJ to derive TBELs on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in 40 CFR section 125.3.

Further, Table A of the Ocean Plan establishes technology-based requirements for conventional pollutants (suspended solids, settleable solids, oil and grease, turbidity, and pH) for industrial Dischargers for which ELGs have not been established.

2. Applicable TBELs

Effluent limitations for suspended solids, settleable solids, oil and grease, turbidity, and pH were established in Order No. R9-2008-0002 based on Table 2 (formerly Table A) of the Ocean Plan. Consistent with Order No. R9-2008-0002 and the requirements of the Ocean Plan, these limitations have been established in this Order for discharges to the Pacific Ocean.

Table F-1. Ocean Plan Table 2 Limitations

Parameters	Units	Effluent Limitations		
		Average Monthly	Weekly Average	Instantaneous Maximum
Oil and Grease	mg/L	25	40	75
Settleable Solids	ml/L	1.0	1.5	3.0
Total Suspended Solids	mg/L	60	--	--
Turbidity	NTU	75	100	225
pH	s.u.	--	--	7.0 – 9.0

C. Water Quality-Based Effluent Limitations (WQBELs)

Water quality-based effluent limitations (WQBELs) have been derived to implement water quality objectives and criteria that protect beneficial uses. Both the beneficial uses and the water quality objectives and criteria have been approved pursuant to federal law. U.S. EPA also approved the SIP and Ocean Plan procedures for calculating individual WQBELs for discharges to inland surface waters and to the Pacific Ocean.

A summary of all applicable WQBELs and the corresponding rationale for the WQBELs is provided in section IV.D.4 of this fact sheet.

1. Scope and Authority

CWA Section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards, including numeric and narrative objectives within a standard.

40 CFR section 122.44(d)(1)(i) requires 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, WQBELs must be established by using the following: (1) U.S. EPA 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 section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs, when necessary, is to ensure protection of the designated uses of receiving waters as specified in the Basin Plan and attainment of applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

This Order authorizes certain discharges to inland surface waters, enclosed bays and estuaries, and the Pacific Ocean within the San Diego Region. Beneficial uses of these receiving waters are designated in chapter 2 of the Basin Plan, and section I of the Ocean Plan. The water quality criteria applicable to these receiving waters are established by the NTR, CTR, the Basin Plan, and the Ocean Plan. Water quality criteria and objectives

established in the NTR, CTR, the Basin Plan, and Ocean are applicable to these beneficial uses.

a. **Basin Plan.** The designated beneficial uses of surface waters throughout the State are summarized in section III.C.1 of this fact sheet. The Basin Plan establishes water quality objectives for conventional, non-conventional, and toxic pollutants based on these designated beneficial uses.

b. **Ocean Plan.** The Ocean Plan specifies procedures for the implementation of water quality objectives for discharges to the Pacific Ocean. The beneficial uses of the Pacific Ocean are summarized in section III.C.2 of this fact sheet.

c. **Thermal Plan.** The Thermal Plan establishes water quality objectives for inland and coastal waters throughout the State.

d. **State Implementation Plan (SIP).** The SIP specifies procedures for the implementation of CTR/NTR water quality criteria for the discharge of non-stormwater discharges to inland surface waters and enclosed bays and estuaries.

3. Determining the Need for WQBELs for Discharges to Inland Surface Waters, Enclosed Bays, Lagoons, and Estuaries

The determination for a discharge to cause or contribute to an exceedance of applicable water quality criteria, and the establishment of effluent limitations prescribed under this Order for discharges to inland surface waters, enclosed bays, and estuaries, are calculated assuming no dilution. Eligible Dischargers are required to collect and analyze a representative sample of untreated groundwater for parameters with applicable water quality criteria/objectives, as specified in section II of the MRP prior to receiving authorization to discharge under this Order. Untreated groundwater, and not final effluent, must be sampled and characterized for the purposes of the reasonable potential analysis: 1) to provide a conservative measurement of the concentration of the pollutants that may be potentially discharged to the receiving water; 2) because some groundwater extraction discharges may not need treatment prior to discharge; and 3) to allow for a determination if treatment or additional controls will be necessary to meet applicable water quality objectives/criteria.

a. Toxic Parameters (CTR/NTR)

In accordance with section 1.3 of the SIP, the San Diego Water Board conducts a reasonable potential analysis for each pollutant with an applicable criterion or objective to determine if a WQBEL is required. Water quality data from representative sample(s) are compared with the corresponding water quality objective/criteria-based triggers. The parameter(s) with a value exceeding the applicable trigger is considered to have reasonable potential to exceed water quality criterion or objective and the corresponding WQBEL(s) and monitoring requirements are prescribed in the NOA for the discharge.

In addition to applicable NTR and CTR criteria, Order No. R9-2008-0002 established effluent limitations for dibromochloropropane and ethylene dibromide based on primary maximum contaminant levels (MCLs) for the protection of human health. Further, Order No. R9-2008-0002 established an effluent limitation for methyl tertiary butyl ether (MTBE) based on a secondary MCL for discharges to receiving waters with a municipal beneficial use. This Order incorporates criteria for dibromochloropropane, ethylene dibromide, and MTBE for the protection of receiving waters with the municipal beneficial use.

b. TMDL-based Parameters

The San Diego Water Board developed TMDL-based WLAs for copper, lead, and zinc in Chollas Creek (Resolution No. R9-2007-0043). The effluent limitations for these pollutants were established regardless of whether or not there is reasonable potential for the pollutants to be present in the discharge at levels that would cause or contribute to an exceedance of water quality criteria. The San Diego Water Board developed water quality-based effluent limitations for these pollutants pursuant to 40 CFR section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis. Similarly, the SIP at section 1.3 recognizes that reasonable potential analysis is not appropriate if a TMDL has been developed.

c. Basin Plan Parameters

The San Diego Water Board must evaluate the potential for discharges to contribute to an exceedance of water quality objectives established in the Basin Plan. Reasonable potential to cause or contribute to an exceedance of water quality objectives shall be evaluated by comparing the sample data to a water quality objective-based trigger. The parameter(s) with a value exceeding the applicable water quality objective-based trigger is considered to have reasonable potential to exceed the water quality objective and the corresponding WQBEL(s) and monitoring requirements are prescribed in the NOA for the discharge. Consistent with Order No. R9-2008-0002, Basin Plan water quality objectives for the following parameters will be evaluated for reasonable potential:

- Percent Sodium
- Total Nitrogen
- Total Phosphorus
- MBAS
- Dissolved Oxygen
- Fluoride
- Dissolved Oxygen
- Iron
- Manganese

Extracted groundwater discharged to inland surface waters may contain inconsistent levels of settleable and suspended solids, impacting the ability to accurately evaluate reasonable potential to exceed applicable water quality objectives with limited data during the NOI process. Thus, effluent limitations for turbidity shall be established independent of sampling results submitted by Dischargers for discharges to inland surface waters. However, consistent with Order No. R9-2007-0034 and R9-2008-0002, turbidity effluent limitations for discharges to bays and estuaries shall be based on Table 2 of the Ocean Plan.

The Basin Plan established water quality objectives for pH throughout the San Diego Region. Based on the requirements of the Basin Plan, instantaneous effluent limitations for pH are included in this Order.

d. Pathogens

Order No. R9-2008-0002 established an instantaneous effluent limitation for total coliform of 1,000 MPN/100 mL. The effluent limitation is consistent with the water quality objective for Bays and Estuaries used for contact recreation. Consistent with Order No. R9-2008-0002, and to protect the contact recreation beneficial uses of bays and estuaries to which inland waters may be tributary, the effluent limitation for total coliform has been carried over.

Order No. R9-2008-0002 established an instantaneous effluent limitation for fecal coliform of 200 MPN/100 mL based on anti-backsliding considerations. In addition, the

effluent limitation established is consistent with the 30-day log mean water quality objective established in the Basin Plan for receiving waters used for contact recreation. Consistent with State and federal anti-backsliding regulations, and to protect the contact recreation beneficial uses of inland surface waters, the effluent limitation for fecal coliform has been carried over.

The discharge of extracted groundwater is not expected to contain significant concentrations of indicator bacteria, unless directly related to a sewer collection system or treatment plant. Thus, only discharges associated with sewage collection or treatment must be evaluated for reasonable potential for indicator bacteria. Discharges, not associated with sewage collection or treatment, are assumed to contain insignificant concentrations of indicator bacteria.

e. Specific Criteria and Objectives for Bays and Estuaries

Water quality data from representative sample(s) are compared with the corresponding water quality objective/criteria-based triggers. The parameter(s) with a value exceeding the applicable trigger is considered to have reasonable potential to exceed the water quality objective and the corresponding WQBEL(s) and monitoring requirements are prescribed in the NOA for the discharge.

Receiving water characteristics and marine life present in bays and estuaries within the San Diego Region closely resemble those found in the Pacific Ocean. Thus, in addition to applicable CTR/NTR criteria and Basin Plan criteria, Order Nos. R9-2007-0034 and R9-2008-0002 considered criteria for a number of pollutants established in the Ocean Plan. Based on State and federal anti-backsliding requirements, these criteria are incorporated into this Order.

i. Toxics

Order No. R9-2008-0002 (and Order No. R9-2007-0034 for many of the same parameters) consider criteria for a number of pollutants established in the Ocean Plan, including:

- Total Residual Chlorine
- Tributyltin
- Tetrachloroethylene
- Chlorinated Phenolics
- 1,1,2,2-tetrachlorethane
- 1,1,1-trichloroethane
- 1,1,2-trichloroethane
- 1,2-dichloroethane
- Phenolic Compounds (non-chlorinated)
- Trichloroethylene
- Vinyl Chloride
- Carbon Tetrachloride
- Ammonia
- Endosulfan
- Hexachlorocyclohexane (HCH)
- Dichloromethane
- PAHs
- TCDD Equivalents

The CTR does not establish criteria for total residual chlorine, tributyltin, phenolic compounds or 1,1,1-trichloroethane for receiving waters without a municipal and domestic beneficial use. Water quality objectives in the Ocean Plan for 1,1,2-trichloroethane; 1,2-dichloroethane; dichloromethane (methylene chloride), tetrachloroethylene, trichloroethylene, vinyl chloride, carbon tetrachloride, TCDD-equivalents, endosulfan, and HCH are more stringent than applicable CTR criteria. For endosulfan, the CTR prescribes criteria for both alpha and beta-endosulfan of 8.7 ng/L each and 240 µg/L for endosulfan sulfate. The lowest Ocean Plan criteria for endosulfan is 9 ng/L. However, the Ocean Plan criteria is

for endosulfan, which includes alpha and beta-endosulfan, and endosulfan sulfate, and is thus more stringent than the combined CTR criteria for alpha and beta-endosulfan and endosulfan sulfate. Similarly, the Ocean Plan criteria for HCH (sum of alpha, beta, gamma, and delta isomers of hexachlorocyclohexane) is more stringent than any single isomer established in the CTR.

Order No. R9-2008-0002 established average monthly and maximum daily effluent limitations for chlorinated phenolics, citing the CTR as the source for these limitations. However, the CTR does not establish water quality criteria for "chlorinated phenolics". The CTR does establish water quality standards for numerous chlorinated phenolic isomers. Consistent with the CTR, this Order considers criteria for the chlorinated phenolic isomers specified in the CTR, and does not carry over the average monthly and maximum daily effluent limitation for "chlorinated phenolics" as a group, established in Order No. R9-2008-0002. This Order does carry over the instantaneous maximum and 6-month median criteria established Order No. R9-2008-0002 and establishes a revised maximum daily effluent limitation, based on the Ocean Plan. This criteria is less stringent than the limitations contained in Order No. R9-2008-0002. However, the criteria referenced in Order No. R9-2008-0002 for "chlorinated phenolics" based on the CTR appears to be a technical mistake, and backsliding in this case is consistent with the specifications of section 402(o)(2) of the CWA. Further, the application of WQBELs for chlorinated phenolics based on the Ocean Plan, and for the individual chlorinated phenolics based on the CTR, will be protective of water quality.

Order No. R9-2008-0002 establishes an effluent limitation for halomethane that is more stringent than the CTR criteria for bromoform and bromomethane. Because halomethanes include these two pollutants, the effluent limitation for halomethanes is protective of CTR criteria for bromoform and bromomethane and has been applied in this Order.

ii. MTBE

Although the San Diego Bay is not designated as a municipal and domestic water source, Order Nos. R9-2007-0034 and R9-2008-0002 established an instantaneous maximum effluent limitation of 5 µg/L for methyl-tert-butyl ether (MTBE) based on a secondary MCL. This Order carries over the criteria for MTBE based on State and federal anti-backsliding regulations.

iii. Ammonia

Order No. R9-2008-0002 established effluent limitations for ammonia based on the Ocean Plan. The Basin Plan establishes a water quality objective for un-ionized ammonia of 0.025 mg/L that are also applicable to inland waters, bays, and estuaries. Un-ionized ammonia is ph, salinity, and temperature dependent. To determine the appropriate water quality-based effluent limitation for total ammonia, receiving water data for San Diego Bay from the April 2012 final report, *Characterizing the Spatial and Temporal Variation of Key Physical Water Quality Parameters in San Diego Bay: The importance of Continuous Baseline Data when Evaluating Physical, Biological, and Chemical Process*, prepared for the Environmental Services Department of the San Diego Unified Port District by Tierra Data, Inc, and receiving water data from Station No. 093 (Mission Bay Offshore) from the Coastal Data Information Program provided by SCRIPPS Institute of Oceanography were considered. The highest annual receiving water temperature between 2010 through 2013 ranged from 15.9 to 17.9 degrees Celsius. Data for

salinity was limited from March 2010 through October 2011. Average monthly salinity data within the San Diego Bay ranged from 32.15 ppt to 35.56 ppt. The pH of sea water, which is largely determined by the bicarbonate/borate concentration, is typically in the range of 7.5 and 8.5 standard units. Assuming conservative values (temperature of 17.9 °C, salinity of 32 ppt, and pH of 8.2 standard units), total ammonia water quality objectives were derived from the un-ionized ammonia concentrations using the following formula (*Ambient Water Quality Criteria for Ammonia [saltwater] – 1989*, U.S. EPA Publication 440/5-88-004, U.S. EPA, 1989):

For salinity > 10 ppt: fraction of NH_3 = $\frac{1}{1+10^{(pK-pH)}}$

Where:

pK = 9.245 + 0.116(I) + 0.0324*(298-T) + 0.0415*(P)/T*
I = the molal ionic strength of saltwater = 19.9273(S)/(1000-1.005109*S)*
S = salinity (parts per thousand)
T = temperature in Kelvin
P = pressure (one atmosphere)

The resulting water quality objective for total ammonia is 670 µg/L. The Basin Plan does not specify how to implement the water quality objective for ammonia; however, nutrient objectives are often applied annually to account for seasonal variation. Assuming an annual average effluent limitation of 670 µg/L, the 6-month median criteria of 600 µg/L established in Order No. R9-2008-0002 based on the Ocean Plan is more stringent. Thus, the Ocean Plan criteria for ammonia appears protective of the water quality objective for un-ionized ammonia, and have been carried over.

Order No. R9-2008-0002 established instantaneous maximum effluent limitations equal to the 30-day geometric mean water quality objectives for total coliform (1,000 MPN/100 mL) and fecal coliform (200 MPN/100 mL). The effluent limitation for fecal coliform is protective of the REC-1 beneficial uses of the receiving waters within this category and has been carried over. The effluent limitation for total coliform is not protective of the beneficial use of SHELL present in the receiving waters within this category. The effluent limitation for total coliform has been established consistent with the water quality objectives for total coliform for the protection of SHELL. Order No. R9-2008-0002 does not establish effluent limitations for enterococci. This Order establishes effluent limitations for enterococci based on the water quality objectives established in the Basin Plan for areas designated as a beach due to the REC-1 beneficial use.

iv. Turbidity

Order No. R9-2008-0002 establishes a maximum daily effluent limitation for turbidity of 2.2 µg/L based on the CTR for discharges to bays and harbors. This effluent limitation for turbidity is in addition to another effluent limitation for turbidity expressed in NTU, also for discharges to bays and harbors. This duplicative limitation appears to be a mistake. The CTR does not establish turbidity water quality criteria, and turbidity units are expressed as NTU, not µg/L. Thus, the maximum daily effluent limitation of 2.2 µg/L for turbidity has been removed because a maximum daily effluent limitation for turbidity expressed in µg/L is unsupported. The average monthly, average weekly, and instantaneous maximum effluent limitations

established in Order No. R9-2008-0002 are consistent with the Ocean Plan and have been carried over.

v. Pathogens

Order Nos. R9-2007-0034 and R9-2008-0002 established instantaneous maximum effluent limitations equal to the 30-day geometric mean water quality objectives for total coliform (1,000 MPN/100 mL) and fecal coliform (200 MPN/100 mL). The effluent limitation for fecal coliform is protective of the REC-1 beneficial uses of the receiving waters within this category. The effluent limitation for total coliform is not protective of the beneficial use of SHELL present in the receiving waters within this category. Criteria for total coliform have been established consistent with the water quality objectives for total coliform for the protection of SHELL. Order No. R9-2008-0002 does not evaluate criteria for enterococci. This Order incorporates criteria for enterococci based on the water quality objectives established in the Basin Plan for the REC-1 beneficial use.

4. Determining the Need for WQBELs for Discharges to the Pacific Ocean

Eligible Dischargers are required to collect and analyze a representative sample of untreated groundwater for parameters with applicable water quality criteria/objectives, as specified in Appendix C-1 of this Order prior to receiving authorization to discharge under this Order. Untreated groundwater, and not final effluent, shall be monitored for the purposes of conducting the reasonable potential analysis: 1) to provide a conservative measurement of the concentration of the pollutants that may be discharged to the receiving water; 2) because some groundwater extraction activities may not need to provide treatment prior to discharge; and 3) to allow for a determination if treatment or additional controls will be necessary to meet applicable water quality objectives/criteria.

a. Toxic Pollutants (Table 1 of the Ocean Plan)

In accordance with Appendix VI of the Ocean Plan, the San Diego Water Board conducts a reasonable potential analysis for each pollutant with an applicable criterion or objective to determine if a WQBEL is required. Water quality data from representative sample(s) are compared with the corresponding applicable water quality objective triggers. These triggers have been developed based on the procedures specified in Appendix VI of the Ocean Plan that would result in reasonable potential within the initial pollutant scan conducted pursuant to Appendix C-1 of Attachment C of this Order. The parameters with a value exceeding the applicable water quality criteria-based trigger are considered to have reasonable potential to exceed water quality objective and the corresponding WQBEL(s) and monitoring requirements are prescribed in the NOA for the discharge.

The determination for a discharge to cause or contribute to an exceedance of applicable water quality objectives, and the establishment of effluent limitations prescribed under this Order for discharges to the surf zone of the Pacific Ocean, are calculated assuming a dilution of 3 : 1 (seawater : effluent).

The initial dilution factor is carried over from Order No. R9-2008-0002 based on a preliminary dilution model submitted by Professor Gerhard H. Jirka, School of Civil and Environmental Engineering, Cornell University, for a dewatering project associated with construction of the United States Section of the International Boundary and Water Commission's South Bay International Wastewater Treatment Plant's ocean outfall near

Tijuana, Mexico. Order No. R9-2008-0002 states that this particular model assumes the following:

i. Mixing of the dewatering discharge is primarily controlled by wave-induced turbulence and longshore conditions;

ii. 0.55 meter wave height with a 15 second period occurring with a 95 percent exceedance probability;

iii. A longshore velocity of 5 to 10 centimeters per second; and

iv. A near-shore beach slope of 3 percent.

The model results in an initial dilution ratio of six. Since the model does not represent topographic and wave conditions throughout the San Diego Region, the initial dilution factor for discharges to surf zones was halved to ensure the conservative application of water quality objectives and the protection of beneficial uses.

Order No. R9-2008-0002 applied the 3 : 1 dilution factor to all pollutants specified in Table 1 (previously Table B) of the Ocean Plan, with the exception of acute and chronic toxicity. Because extracted groundwater addressed under this Order may discharge to a variety of locations along the Pacific Ocean coast line within the San Diego Region, applying WET limitations without dilution provides additional protection from potential synergistic effects to aquatic life from the pollutants present in the effluent, and ensures that discharges that occur under unanticipated receiving water conditions will not negatively impact aquatic life. Consistent with Order No. R9-2008-0002, this Order applies acute and chronic toxicity criteria without dilution.

b. Pathogens

Criteria for total coliform, fecal coliform, and enterococcus are based on section III.B of the Ocean Plan. These criteria are consistent with those established in Order No. R9-2008-0002.

5. WQBEL Calculations

a. Toxic Parameters (CTR/NTR) and Applicable WLAs for Chollas Creek (copper, lead, and zinc)

The procedures for calculating WQBELs for CTR and NTR criteria are specified in the U.S. EPA's Technical Support Document for Water Quality-Based Toxics Control (TSD) of 1991 (USEPA/505 /2-90-001) and the SIP, and were used to calculate the WQBELs for CTR and NTR parameters in this Order.

The following example demonstrates the method for calculating WQBELs for NTR/CTR parameters for this Order. This example demonstrates the WQBELs for copper to an inland surface waterbody with a designated beneficial use of municipal and domestic supply (MUN).

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C>B$, and

$ECA = C$ when $C \leq B$,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness and translators. The applicable hardness assumed

is this example is 400 $CaCO_3$.

D = The dilution credit, and

B = The ambient background concentration

As discussed above, this Order does not allow dilution; therefore:

ECA = C

When a WLA has been established through a TMDL for a parameter, the applicable WLA is set equal to the ECA. See Attachment B for a discussion of applicable WLAs established through a TMDL. For this example, it is assumed that the discharge is to a waterbody where there is no TMDL applicable, and the criteria provided in the CTR for the protection of aquatic life is used.

$C = ECA_{acute} = 54$ µg/L

$C = ECA_{chronic} = 31$ µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. Because WQBELs will be calculated based on the results of a single monitoring event, a CV of 0.6 has been applied.

The following data were used to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier$_{acute}$	ECA Multiplier$_{chronic}$
1	0.6	0.321	0.527

Total recoverable copper:

$LTA_{acute} = 54$ µg/L x 0.321 = 17

$LTA_{chronic} = 9.5$ µg/L x 0.527 = 16

Step 3: Select the most limiting (lowest) of the LTA:

For total recoverable copper, the most limiting LTA is $LTA_{chronic}$.

LTA = 16

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquaticlife} = LTA \times AMEL_{multiplier95}$

$MDEL_{aquaticlife} = LTA \times MDEL_{multiplier99}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on a 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

The following data were used to develop the AMEL and MDEL for effluent limitations using equations provided in section 1.4, Step 5 of the SIP:

No of Samples Per Month	CV	$Multiplier_{MDEL99}$	$Multiplier_{AMEL95}$
4	0.6	3.11	1.55

Total recoverable copper:

AMEL = 16 µg/L x 1.55 = 25

MDEL = 16 µg/L x 3.11 = 50

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$:

$AMEL_{human\ health} = ECA_{human\ health}$

Total recoverable copper:

$AMEL_{human\ health}$ = 1,300 µg/L

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of $Multiplier_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL}/Multiplier_{AMEL})$

Total recoverable copper:

$MDEL_{human\ health}$ = 1,300 µg/L x 2.01 = 2,608 µg/L

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for this Order.

For total recoverable copper used in this example, the WQBELs based on aquatic life criteria would be applied. These limitations are expected to be protective of beneficial uses. Final WQBELs are summarized in section IV.D.4 of this Fact Sheet.

b. Toxic Parameters (Table 1 of the Ocean Plan)

From the Table 1 water quality objectives of the Ocean Plan, effluent limitations are calculated according to the following equation for all pollutants, except for acute toxicity

(see section IV.C.7.b of this Fact Sheet to for effluent limit calculations for whole effluent toxicity).

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

A previously discussed, initial dilution (Dm) has been determined to be 3 to 1 by the San Diego Water Board.

Table 2 of the Ocean Plan establishes background concentrations for some pollutants to be used when determining reasonable potential (represented as "Cs"). In accordance with Table 1 implementing procedures, Cs equals zero for all pollutants not established in Table 2. The background concentrations provided in Table 2 are summarized below:

Table F-2. Ocean Plan 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

As an example of how effluent limitations 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:

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 are calculated as follows.

Total residual chlorine:

Ce = 2 + 3 (2 – 0) = 8 µg/L (6-Month Median)
Ce = 8 + 3 (8 – 0) = 32 µg/L (Daily Maximum)
Ce = 60 + 3 (60 – 0) = 240 µg/L (Instantaneous Maximum)

Section III.C.4.j of the Ocean Plan requires that discharge requirements shall also specify effluent limitations in terms of mass emission rate limits, based on WQBEL (concentration) and flowrate. However, this Order prohibits the discharge of extracted groundwater in excess of the flowrate specified in the NOA on which mass-based effluent limitations would be based. As such, mass-loading is limited by both the concentration-based effluent limitations and the permitted flow rate to the same level that

would otherwise be established pursuant to section III.C.4.j of the Ocean Plan. As such, individual mass-based effluent limitations have not been established in the Order. However, the San Diego Water Board may establish mass-based effluent limitations at its discretion within the NOA based on site-specific information.

6. Antibacksliding

Order Nos. R9-2007-0034 and R9-2008-0002 established effluent limitations for a number of pollutants based on State and federal anti-backsliding regulations, however did not provide the basis for which the effluent limitations were initially established in previous permits. Many of the pollutants carried over appear to be water quality-based effluent limitations established consistent with the NTR, CTR, Basin Plan, or Ocean Plan. As such, reasonable potential to exceed applicable water quality criteria/objectives shall be evaluated as previously discussed, and effluent limitations and monitoring requirements established as necessary. However, a number of these parameters could not be identified as being water quality-based, and have been carried over based solely on State and federal anti-backsliding requirements. These effluent limitations, and corresponding monitoring requirements, shall be applied to discharges that exceed the limit-based triggers established in Appendix C-1, and as described in section II.B of the MRP.

a. Inland surface waters

Order No. R9-2008-0002 established effluent limitations for the following parameters to discharges to inland surface waters based on State and federal anti-backsliding regulations:

- Settleable Solids
- Total Suspended Solids
- Hydrogen Sulfide
- Total Residual Chlorine (only for Dischargers that chlorinate)
- Xylene
- Chlorinated Phenolics
- Remaining Base/Neutral Compounds
- Total Petroleum Hydrocarbons

Extracted groundwater discharged to inland surface waters may contain inconsistent levels of settleable and suspended solids, impacting the ability to accurately evaluate the potential to exceed effluent limitations during the NOI process. Thus, effluent limitations for settleable solids and total suspended solids shall be established independent of sampling results submitted by Dischargers for discharges to inland surface waters.

b. Bays and estuaries

Order No. R9-2008-0002 established effluent limitations for discharges associated with contaminated groundwater to bays and estuaries based on State and federal anti-backsliding regulations. Consistent with State and federal anti-backsliding regulations, these effluent limitations have been carried over.

- Total Suspended Solids
- Settleable Solids
- Hydrogen Sulfide
- Ethylbenzene
- Dichloromethane
- Xylene
- Total Petroleum Hydrocarbons
- Halomethanes
- Toluene
- Benzene

Extracted groundwater discharged to bays and estuaries may contain inconsistent levels of settleable and suspended solids, impacting the ability to accurately evaluate the potential to exceed effluent limitations during the NOI process. Thus, effluent limitations

for settleable solids and total suspended solids shall be established independent of sampling results submitted by Dischargers for discharges to bays and estuaries.

c. Pacific Ocean

Order No. R9-2008-0002 established effluent limitations for xylene, total petroleum hydrocarbons, and dissolved oxygen based on State and federal anti-backsliding regulations. Consistent with State and federal anti-backsliding regulations, effluent limitations for xylene, total petroleum hydrocarbons, and dissolved oxygen have been carried over from Order No. R9-2008-0002.

7. Whole Effluent Toxicity (WET)

Effluent limitations for WET are established for all discharges covered under this Order, independent of the initial pollutant scan required by Appendix C-1 of Attachment C of this Order. Due to uncertainty on toxic effects resulting from the limited initial monitoring data; the potential presence of a variety of pollutants from groundwater contamination sites and plumes in close proximity to groundwater extraction sites, and the potential for toxic synergistic reactions of pollutants in the extracted groundwater discharge, WET effluent limitations and monitoring requirements are necessary for the protection of aquatic life.

Whole effluent toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Toxic constituents could be present in the effluent, or could have synergistic or additive effects.

In the past, the State Water Board reviewed the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential with respect to SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Water Board adopted Order No. 2003-0012 (Los Coyotes Order) deferring the issue of numeric chronic toxicity effluent limitations until a subsequent Phase of the SIP is adopted. In the meantime, the State Water Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1.0 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits.

However, many facts have changed since the State Water Board adopted the Los Coyotes Order in 2003. USEPA published two new guidance documents with respect to chronic toxicity testing; the California Regional Water Quality Board, Los Angeles Region adopted NPDES permits for industrial facilities incorporating TST-based effluent limits for chronic toxicity and has adopted numeric chronic toxicity effluent limits for industrial facilities and POTWs with TMDL WLAs of 1 TUc; and the California Regional Water Quality Board, Santa Ana Region adopted an NPDES permit for a POTW incorporating TST-based effluent limits for chronic toxicity. The San Diego Water Board has also adopted TST-based chronic toxicity effluent limitations in permits regulating discharges from boatyards and shipyards. In addition to these and other factual developments, the State Water Board has not adopted a revised policy that addresses chronic toxicity effluent limitations in NPDES permits for inland discharges, as anticipated by the Los Coyotes Order. Because the Los Coyotes Order explicitly “declined to make a determination … regarding the propriety of the final numeric effluent limitations for chronic toxicity…,” (Los Coyotes Order, p. 9) and because of the differing facts before the San Diego Water Board in 2015 as compared to the facts that were the basis for the Los Coyotes Order in 2003, the San Diego Water Board concludes that the

Los Coyotes Order does not require inclusion of narrative rather than numeric effluent limitations for chronic toxicity. Further, the San Diego Water Board finds that due to uncertainty resulting from the limited monitoring data used to evaluate reasonable potential for groundwater extraction discharges to cause or contribute to an exceedance of water quality objectives/criteria, and considering the potential for toxic synergistic reactions of pollutants within discharges, WET effluent limitations and monitoring requirements are necessary for the protection of aquatic life. This Order contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirement contained in this Order shall be determined in accordance with section IX.K of this Order.

For this Order, chronic toxicity in the discharge is evaluated using a median monthly effluent limitation that utilizes USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach. The chronic toxicity effluent limitations are expressed as "Pass" for the median monthly summary results and as "Pass" or "<50% Effect" for each maximum daily individual results.

In June 2010, USEPA published a guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to USEPA's WET test methods. Section 9.4.1.2 of USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002), recognizes that, "the statistical methods in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal) endpoints and is appropriate to use for both freshwater and marine EPA WET test methods.

USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present. Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed—as a component of test review following statistical analysis—to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2.). In 2000, EPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, IC25s) were calculated appropriately (EPA 821-B-00-004).

USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for ten commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC50s, and IC25s, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by EPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC50, and IC25 test

results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

Appropriate interpretation of the measurement result from USEPA's TST statistical approach (pass/fail) for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of EPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures—including those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation)—described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does not apply to the statistical assumptions on which the TST is based. The San Diego Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t- test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or PMSDs must be submitted for review by the San Diego Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

a. Inland Surface Waters, Bays and Estuaries

The Basin Plan defines toxicity as the adverse response of organisms to chemicals or physical agents. The Basin Plan establishes a narrative water quality objective for toxicity:

"All waters shall be maintained free of toxic substances in concentrations that are toxic, or that produce detrimental physiological responses in human, plant, animal, or aquatic life."

The implementation of toxicity monitoring requirements and effluent limitations are based on a statistical approach developed by U.S. EPA that assesses the WET measurement of wastewater effects on specific test organisms' ability to survive, grow, and reproduce, called the Test of Significant Toxicity (TST). Guidance documents for the TST include:

i. *Discharge Elimination System Test of Significant Toxicity Implementation Document, An Additional Whole Effluent Toxicity Statistical Approach for Analyzing Acute and Chronic Data (EPA 833-R-10-003), and*

ii. *U.S. EPA's June 2010 guidance document titled National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document, An Additional Whole Effluent Toxicity Statistical Approach for Analyzing Acute and Chronic Data (EPA 833-R-10-004).*

The TST approach is a statistical method with hypothesis testing techniques based on research and peer-reviewed publications. The approach examines whether an effluent at the critical concentration and a control within a WET test differ by an unacceptable amount (the amount that would have a measured detrimental effect on the ability of aquatic organisms to thrive and survive).Organism response to the effluent and control are unlikely to be exactly the same, even if no toxicity is present. They might differ by such a small amount that even if statistically significant, it would be considered negligible biologically. A more useful approach could be to rephrase the null hypothesis, "Is the mean response in the effluent less than a defined biological amount?" The Food and Drug Administration has successfully used that approach for many years to evaluate drugs, as have many researchers in other biological fields. In that approach, the null hypothesis is stated as the organism response in the effluent is less than or equal to a fixed fraction (b) of the control response (e.g., 0.75 of the control mean response):

Null hypothesis: Treatment mean ≤ *b* * Control mean

To reject the null hypothesis above means the effluent is considered nontoxic. To accept the null hypothesis means the effluent is toxic.

Before the TST null hypothesis expression could be recommended by U.S. EPA, certain Regulatory Management Decisions (RMDs) were needed, including what effect level in the effluent is considered unacceptably toxic and the desired frequency of declaring a truly negligible effect within a test nontoxic.

In the TST approach, the *b* value in the null hypothesis represents the threshold for unacceptable toxicity. For chronic toxicity, the U.S. EPA made the RMD that the b value is set at 0.75, which means that a 25 percent effect (or more) at the in-wastestream concentration (IWC) is considered evidence of unacceptable chronic toxicity.

U.S. EPA's RMDs for the TST method are intended to identify unacceptable toxicity most of the time when it occurs, while also minimizing the probability that the in-stream waste concentration (IWC) is declared toxic when in fact it is truly acceptable. Additional RMDs by U.S. EPA to achieve this objective were made regarding acceptable maximum false positive (13 using a TST approach) and false negative rates (a using a TST approach).

In the TST approach, the RMDs are defined as:

i. Declare a sample toxic between 75 - 95 percent of the time ($0.05 \leq a \leq 0.25$) when there is unacceptable toxicity.

ii. Declare an effluent non-toxic no more than 5 percent of the time ($\beta \leq 0.05$) when the effluent effect at the critical effluent concentration is 10 percent.

U.S. EPA used valid toxicity data from approximately 2,000 WET tests to develop and evaluate the TST approach. The TST approach was tested using nine different whole effluent toxicity test methods comprising twelve biological endpoints and representing most of the different types of whole effluent toxicity test designs in use. More than one million computer simulations were used to select appropriate alpha error rates for each test method that also achieved U.S. EPA's other RMDs for the TST approach.

Effluent limitations are established using the TST "pass" "fail" approach as well as a percent effect. A MDEL for chronic toxicity is established in this Order and is exceeded

when a toxicity test results in a "fail," and the percent effect is greater than or equal to 0.50 for chronic toxicity tests.

Chronic Pass

A test result that rejects the null hypothesis (Ho) below is reported as "Pass" in accordance with the TST approach:

Ho: Mean response (100 percent effluent) ≤ 0.75 x Control mean response

Chronic Fail

A test result that does not reject the null hypothesis (Ho) above is reported as "Fail" in accordance with the TST approach.

The percent effect at the IWC is calculated for each test result using the following equation:

$$\% \text{ Effect at IWC} = \frac{\text{Mean Control Reponse-Mean IWC Response}}{\text{Mean Control Response}} \times 100$$

The IWC for these discharges are established at 100% effluent. Allowances for dilution and a different IWC may be made at the discretion of the San Diego Water Board. Because the San Diego Water Board has no documentation to support a different IWC, the IWC is defined as 100 percent effluent (undiluted). This definition of IWC is consistent with other San Diego Water Board's NPDES permitted discharges to San Diego Bay which do not allow dilution.

The San Diego Water Board finds that the application of U.S. EPA's TST method with the 50% effect for chronic toxicity is scientifically defendable and appropriate for the determination of compliance with the Basin Plan's narrative objective for toxicity. As such, toxicity monitoring requirements, analysis, and effluent limitations are established in this Order based on U.S. EPA's TST method and a 50% effect for chronic toxicity.

Using the TST approach with the appropriate percent effect clarifies the requirements for toxicity analyses, provides Dischargers with the positive incentive to generate high quality data, and affords greater protection to aquatic life. Thus, WET effluent limitations established based on the TST method are considered at least as stringent as previous WET limitations established in Order Nos. R9-2007-0034 and R9-2008-0002.

b. Pacific Ocean

Table 1 of the Ocean Plan establishes numeric water quality objectives to acute and chronic toxicity:

Table F-3. Ocean Plan Objectives for Toxicity

Parameter	Water Quality Objective
Acute Toxicity	0.3 TUa
Chronic Toxicity	1 TUc

As previously discussed, because discharges addressed under this Order may discharge to a variety of locations along the Pacific Ocean coast line within the San Diego Region, applying whole effluent toxicity limitations without dilution provides additional protection from potential synergistic effects to aquatic life from the pollutants present in the effluent, and ensures that discharges that occur under unanticipated

receiving water conditions will not negatively impact aquatic life. Consistent with Order No. R9-2008-0002, this Order applies acute and chronic toxicity criteria without dilution.

Based on the procedures specified in section III.C.4 of the Ocean Plan, and discussed in section IV.C.5.b of this fact sheet, the resulting chronic toxicity effluent limitation for discharges to the Pacific Ocean is 1 TUc.

Section III.C.4.b of the Ocean Plan specifies the following equation for the calculation of the acute toxicity effluent limitation:

Ce = Ca + (0.1) Dm (Ca) where,

Ca = the water quality objective to be met at the completion of initial dilution (µg/L)

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater

The resulting acute toxicity effluent limitation for discharges to the Pacific Ocean is 0.3 TUa.

D. Final Effluent Limitations

1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 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. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order except for one technical mistake for chlorinated phenolics referenced on page F-23.

2. Antidegradation Policies

Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16. Resolution 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing high water quality be maintained unless degradation is justified based on specific findings. The State Water Board and Regional Water Board's Water Quality Control Plans implement, and incorporate by reference, both the State and federal antidegradation policies. The permitted discharges must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution 68-16.

Given the nature of a general permit and the broad range of beneficial uses to be protected across the Region, it is not feasible to analyze each surface water body in the Region to determine which water bodies are of high quality for the constituents in the discharges authorized by this Order. The San Diego Water Board finds that, due in part to the often times intermittent and temporary characteristics of these discharges, the impact on existing surface water quality from these discharges will be insignificant. While high-quality surface waters may be temporarily degraded, any such impacts to surface water quality that may occur are consistent with the maximum social and economic benefit of the people of the State, provided that the discharges comply with this Order. The discharges are a necessary consequence of providing an affordable and practical means for managing groundwater to the people of the State. The treatment and BMP standards required under this Order constitute best practical treatment and control of these discharges. Therefore the discharges

permitted under this Order are consistent with the antidegradation provision of 40 CFR section 131.12 and the State Water Board Resolution 68-16.

3. Stringency of Requirements for Individual Pollutants

Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by U.S. EPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4. Mass-Based Effluent Limitations

All permit limitations, standards, and prohibitions shall also be expressed in terms of mass except for pH, or other pollutants which cannot appropriately be expressed by mass or under certain circumstances including "when applicable standards and limitations are expressed in terms of other units of measurement" (40 CFR section 122.45(f)(1)).

5. Final Effluent Limitations

a. All Inland Freshwater Surface Waters except for Chollas Creek

Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 part per thousand and above and at locations where this occurs 95% of the time. Where receiving water salinities are between 1 and 10 parts per thousand the more stringent of freshwater or saltwater criteria applies. Discharges to inland freshwater surface waters, shall not exceed the effluent limitations specified below:

Table F-4. Hardness Dependent Metal Effluent Limitations for Discharges to Inland Freshwater Surface Waters

Parameter[1]	Units	Hardness (mg/L)						Basis
		Up to 200		200 - 300		300 and above		
		AMEL	MDEL	AMEL	MDEL	AMEL	MDEL	
Cadmium	µg/L	3.5	7.0	4.8	9.6	6.0	12	CTR AL
Copper[2]	µg/L	14	28	20	39	25	50	CTR AL
Lead[2]	µg/L	6.3	13	11	21	15	31	CTR AL
Nickel	µg/L	77	150	110	220	140	280	CTR AL
Silver	µg/L	6.7	13	13	27	22	44	CTR AL
Zinc[2]	µg/L	107	220	150	300	190	390	CTR AL

CTR AL – California Toxics Rule, Aquatic Life Criteria
[1] All metals are expressed as total recoverable.
[2] Discharges to Chollas Creek shall not exceed the effluent limitations established in section IV.A.1.b of this permit

b. Chollas Creek Specific TMDL-based Effluent Limitations

Discharges to Chollas Creek shall not exceed the following effluent limitations for copper, lead, and zinc.

Table F-5. Hardness-Dependent Metal Limits for Discharges to Chollas Creek

Parameter[1]	Units	Hardness (mg/L)						Basis
		Up to 200		200 - 300		300 and above		
		AMEL	MDEL	AMEL	MDEL	AMEL	MDEL	
Copper	µg/L	11.6	23.2	16.8	33.8	21.5	43.2	TMDL
Lead	µg/L	3.9	7.8	5.6	12.0	8.1	16.1	TMDL
Zinc	µg/L	94.4	189.4	133.1	267.0	169.9	340.8	TMDL

TMDL – Total Maximum Daily Load (Resolution No. R9-2007-0043)
[1] All metals are expressed as total recoverable.

c. Municipal Freshwater Receiving Waters. Discharges to freshwater receiving waters, with a designated municipal (MUN) beneficial use, shall not exceed the effluent limitations specified below:

Table F-6. Effluent Limits for Discharges to Inland Freshwaters with MUN Beneficial Use

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Instantaneous Maximum	
Applicable to All Dischargers					
Settleable Solids	ml/L	0.1	--	0.2	Previous Order
Total Suspended Solids	mg/L	30	--	50	Previous Order
Turbidity	NTU	--	--	20[1]	Basin Plan
Chronic Toxicity	Pass/Fail	--	Pass[2]	--	Basin Plan
pH	standard units	--	--	6.5 – 8.5[3]	Basin Plan
Based on Results of Reasonable Potential Analysis					
Hydrogen Sulfide	µg/L	2.0	4.0	10	Previous Order
Xylene	µg/L	--	--	5	Previous Order
Chlorinated Phenolics	µg/L	--	--	1	Previous Order
Remaining Base/Neutral Compounds	µg/L	--	--	10	Previous Order
Total Petroleum Hydrocarbons	mg/L	--	--	0.5	Previous Order
Percent Sodium	%	--	--	60	Basin Plan
Total Nitrogen	mg/L	1.0	--	2.0	Basin Plan
Total Phosphorus	mg/L	0.1	--	0.2	Basin Plan
Methylene Blue Active Substances (MBAS)	mg/L	--	--	0.5	Basin Plan
Fluoride	mg/L	--	--	1.0	Basin Plan
Total Residual Chlorine	µg/L	2.0	8.0	10	Previous Order
Dissolved Oxygen	mg/L	--	--	5.0/6.0[4]	Basin Plan
Iron, Total Recoverable	mg/L	--	--	0.3	Basin

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Instantaneous Maximum	
					Plan/MCL
Manganese, Total Recoverable	mg/L	--	--	0.05	Basin Plan/MCL
Total Coliform	MPN/100 mL	--	--	1,000	Previous Order
Fecal Coliform	MPN/100 mL	--	--	200	Previous Order
Dibromochloropropane	µg/L	--	--	0.2	Basin Plan/MCL
Ethylene Dibromide	µg/L	--	--	0.02	Basin Plan/MCL
Methyl-Tert-Butyl Ether (MTBE)	µg/L	--	--	5.0	Basin Plan/MCL
Antimony, Total Recoverable	ug/L	14	28	--	CTR HH
Arsenic, Total Recoverable	ug/L	120	250	--	CTR AL
Chromium (III) , Total Recoverable	ug/L	530	1,100	--	CTR AL
Chromium (VI) , Total Recoverable	ug/L	8.0	16.0	--	CTR AL
Mercury, Total Recoverable	ug/L	0.05	0.1	--	CTR HH
Selenium, Total Recoverable	ug/L	4.1	8.2	--	CTR AL
Thallium, Total Recoverable	ug/L	1.7	3.4	--	CTR HH
Cyanide, Total	ug/L	4.3	8.5	--	CTR AL
2,3,7,8 TCDD	ug/L	1.3E-08	2.6E-08	--	CTR HH
TCDD Equivalents	ug/L	1.3E-08	2.6E-08	--	CTR HH
Acrolein	ug/L	320	640	--	CTR HH
Acrylonitrile	ug/L	0.06	0.12	--	CTR HH
Benzene	ug/L	1.2	2.4	--	CTR AL
Bromoform	ug/L	4.3	8.6	--	CTR HH
Carbon Tetrachloride	ug/L	0.25	0.50	--	CTR HH
Chlorobenzene	ug/L	680	1,400	--	CTR HH
Chlorodibromomethane	ug/L	0.40	0.80	--	CTR HH
Dichlorobromomethane	ug/L	0.56	1.1	--	CTR HH
1,2-Dichloroethane	ug/L	0.38	0.76	--	CTR HH
1,1-Dichloroethylene	ug/L	0.1	0.1	--	CTR HH
1,2-Dichloropropane	ug/L	0.52	1.0	--	CTR HH
1,3-Dichloropropylene	ug/L	10	20	--	CTR HH
Ethylbenzene	ug/L	3,100	6,200	--	CTR HH
Methyl Bromide	ug/L	48	96	--	CTR HH
Methylene Chloride	ug/L	4.7	9.4	--	CTR HH
1,1,2,2-Tetrachloroethane	ug/L	0.17	0.34	--	CTR HH
Tetrachloroethylene	ug/L	0.8	1.6	--	CTR HH
Toluene	ug/L	6,800	14,000	--	CTR HH
1,2-Trans-Dichloroethylene	ug/L	700	1,400	--	CTR HH
1,1,2-Trichloroethane	ug/L	0.60	1.2	--	CTR HH

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Instantaneous Maximum	
Trichloroethylene	ug/L	2.7	5.4	--	CTR HH
Vinyl Chloride	ug/L	2.0	4.0	--	CTR HH
2-Chlorophenol	ug/L	120	240	--	CTR HH
2,4-Dichlorophenol	ug/L	93	190	--	CTR HH
2,4-Dimethylphenol	ug/L	540	1,100	--	CTR HH
4,6-dinitro-o-resol	ug/L	13	27	--	CTR HH
2,4-Dinitrophenol	ug/L	70	140	--	CTR HH
Pentachlorophenol	ug/L	0.28	0.56	--	CTR HH
Phenol	ug/L	21,000	42,000	--	CTR HH
2,4,6-Trichlorophenol	ug/L	2.1	4.2	--	CTR HH
Acenaphthene	ug/L	1,200	2,400	--	CTR HH
Anthracene	ug/L	9,600	19,000	--	CTR HH
Benzidine	ug/L	0.00012	0.00024	--	CTR HH
Benzo(a)Anthracene	ug/L	0.0044	0.0088	--	CTR HH
Benzo(a)Pyrene	ug/L	0.0044	0.0088	--	CTR HH
Benzo(b)Fluoranthene	ug/L	0.0044	0.0088	--	CTR HH
Benzo(k)Fluoranthene	ug/L	0.0044	0.0088	--	CTR HH
Bis(2-Chloroethyl)Ether	ug/L	0.031	0.062	--	CTR HH
Bis(2-Chloroisopropyl)Ether	ug/L	1,400	2,800	--	CTR HH
Bis(2-Ethylhexyl)Phthalate	ug/L	1.8	3.6	--	CTR HH
Butylbenzyl Phthalate	ug/L	3,000	6,000	--	CTR HH
2-Chloronaphthalene	ug/L	1,700	3,400	--	CTR HH
Chrysene	ug/L	0.0044	0.0088	--	CTR HH
Dibenzo(a,h)Anthracene	ug/L	0.0044	0.0088	--	CTR HH
1,2-Dichlorobenzene	ug/L	2,700	5,400	--	CTR HH
1,3-Dichlorobenzene	ug/L	400	802	--	CTR HH
1,4-Dichlorobenzene	ug/L	400	802	--	CTR HH
3,3 Dichlorobenzidine	ug/L	0.04	0.080	--	CTR HH
Diethyl Phthalate	ug/L	23,000	46,000	--	CTR HH
Dimethyl Phthalate	ug/L	310,000	630,000	--	CTR HH
Di-n-Butyl Phthalate	ug/L	2,700	5,400	--	CTR HH
2,4-Dinitrotoluene	ug/L	0.11	0.22	--	CTR HH
1,2-Diphenylhydrazine	ug/L	0.04	0.080	--	CTR HH
Fluoranthene	ug/L	300	600	--	CTR HH
Fluorene	ug/L	1,300	2,600	--	CTR HH
Hexachlorobenzene	ug/L	0.00075	0.0015	--	CTR HH
Hexachlorobutadiene	ug/L	0.44	0.88	--	CTR HH
Hexachlorocyclopentadiene	ug/L	240	480	--	CTR HH
Hexachloroethane	ug/L	1.9	3.80	--	CTR HH
Indeno(1,2,3-cd)Pyrene	ug/L	0.0044	0.0088	--	CTR HH
Isophorone	ug/L	8.4	17	--	CTR HH
Nitrobenzene	ug/L	17	34	--	CTR HH
N-Nitrosodimethylamine	ug/L	0.0007	0.0014	--	CTR HH
N-Nitrosodi-n-Propylamine	ug/L	0.005	0.010	--	CTR HH
N-Nitrosodiphenylamine	ug/L	5.0	10.0	--	CTR HH

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Instantaneous Maximum	
Pyrene	ug/L	960	1,900	--	CTR HH
Aldrin	ug/L	0.00013	0.00026	--	CTR HH
alpha-BHC	ug/L	0.0039	0.0078	--	CTR HH
beta-BHC	ug/L	0.014	0.028	--	CTR HH
gamma-BHC	ug/L	0.019	0.038	--	CTR HH
Chlordane	ug/L	0.00057	0.0011	--	CTR HH
4,4'-DDT	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDE	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDD	ug/L	0.00083	0.0017	--	CTR HH
Dieldrin	ug/L	0.00014	0.00028	--	CTR HH
alpha-Endosulfan	ug/L	0.046	0.092	--	CTR HH
beta-Endosulfan	ug/L	0.046	0.092	--	CTR HH
Endosulfan Sulfate	ug/L	110	220	--	CTR HH
Endrin	ug/L	0.029	0.059	--	CTR AL
Endrin Aldehyde	ug/L	0.76	1.5	--	CTR HH
Heptachlor	ug/L	0.00021	0.00042	--	CTR HH
Heptachlor Epoxide	ug/L	0.00010	0.00020	--	CTR HH
PCBs sum	ug/L	0.00017	0.00034	--	CTR HH
Toxaphene	ug/L	0.00016	0.00033	--	CTR AL

MCL – Maximum Contaminant Levels
CTR HH – California Toxics Rule, Human Health Criteria
CTR AL – California Toxics Rule, Aquatic Life Criteria
[1] In addition to an instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time.
[2] As specified in section IV of the MRP, Attachment E of this permit.
[3] Within the limits of 6.5 and 8.5 s.u. at all times.
[4] Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 in waters with cold fresh-water habitat beneficial use.

d. Non-Municipal Beneficial Use Freshwater Receiving Waters, including Buena Vista Lagoon. Discharges to freshwater receiving waters, without a designated municipal (MUN) beneficial use, shall not exceed the effluent limitations specified below:

Table F-7. Effluent Limits for Discharges to Inland Freshwaters without MUN Beneficial Use, including Buena Vista Lagoon

Parameter	Unit	Effluent Limitations			Basis
		AMEL	MDEL	Instantaeous Maximum	
Applicable to All Dischargers					
Settleable Solids	ml/L	0.1	--	0.2	Previous Order
Total Suspended Solids	mg/L	30	--	50	Previous Order
Turbidity	NTU	--	--	20[1]	Basin Plan
Chronic Toxicity	Pass/Fail	--	Pass[2]	--	Basin Plan
pH	standard units	--	--	6.5 – 8.5[3]	Basin Plan
Based on Results of Reasonable Potential Analysis					

Parameter	Unit	Effluent Limitations			Basis
		AMEL	MDEL	Instantaneous Maximum	
Hydrogen Sulfide	µg/L	2.0	4.0	10	Previous Order
Xylene	µg/L	--	--	5	Previous Order
Chlorinated Phenolics	µg/L	--	--	10	Previous Order
Remaining Base/Neutral Compounds	µg/L	--	--	10	Previous Order
Total Petroleum Hydrocarbons	mg/L	--	--	0.5	Previous Order
Percent Sodium	%	--	--	60	Basin Plan
Total Nitrogen	mg/L	1.0	--	2.0	Basin Plan
Total Phosphorus	mg/L	0.1	--	0.2	Basin Plan
Methylene Blue Active Substances (MBAS)	mg/L	--	--	0.5	Basin Plan
Fluoride	mg/L	--	--	1.0	Basin Plan
Total Residual Chlorine	µg/L	2.0	8.0	10	Previous Order
Dissolved Oxygen	mg/L	--	--	5.0/6.0[4]	Basin Plan
Iron, Total Recoverable	mg/L	--	--	0.3	Previous Order/MCL
Manganese, Total Recoverable	mg/L	--	--	0.05	Previous Order/MCL
Total Coliform	MPN/100 mL	--	--	1,000	Previous Order
Fecal Coliform	MPN/100 mL	--	--	200	Previous Order
Dibromochloropropane	µg/L	--	--	0.2	Previous Order/MCL
Ethylene Dibromide	µg/L	--	--	0.02	Previous Order/MCL
Antimony, Total Recoverable	ug/L	4,300	8,600	--	CTR HH
Arsenic, Total Recoverable	ug/L	120	250	--	CTR AL
Chromium (III) , Total Recoverable	ug/L	340	670	--	CTR AL
Chromium (VI) , Total Recoverable	ug/L	8.0	16	--	CTR AL
Mercury, Total Recoverable	ug/L	0.051	0.10	--	CTR HH
Selenium, Total Recoverable	ug/L	4.1	8.2	--	CTR AL
Thallium, Total Recoverable	ug/L	6.3	13	--	CTR HH
Cyanide, Total	ug/L	4.3	8.5	--	CTR AL
2,3,7,8 TCDD	ug/L	1.40E-08	2.81E-08	--	CTR HH
TCDD Equivalents	ug/L	1.40E-08	2.81E-08	--	CTR HH
Acrolein	ug/L	780	1,600	--	CTR HH
Acrylonitrile	ug/L	0.66	1.3	--	CTR HH
Benzene	ug/L	71	140	--	CTR HH
Bromoform	ug/L	360	720	--	CTR HH
Carbon Tetrachloride	ug/L	4.4	8.8	--	CTR HH

Parameter	Unit	Effluent Limitations			Basis
		AMEL	MDEL	Instantaeous Maximum	
Chlorobenzene	ug/L	21,000	42,000	--	CTR HH
Chlorodibromomethane	ug/L	34	68	--	CTR HH
Dichlorobromomethane	ug/L	46	92	--	CTR HH
1,2-Dichloroethane	ug/L	99	200	--	CTR HH
1,1-Dichloroethylene	ug/L	3.2	6.4	--	CTR HH
1,2-Dichloropropane	ug/L	39	78	--	CTR HH
1,3-Dichloropropylene	ug/L	1,700	3,400	--	CTR HH
Ethylbenzene	ug/L	29,000.00	58,000	--	CTR HH
Methyl Bromide	ug/L	4,000	8,000	--	CTR HH
Methylene Chloride	ug/L	1,600	3,200	--	CTR HH
1,1,2,2-Tetrachloroethane	ug/L	11	22	--	CTR HH
Tetrachloroethylene	ug/L	8.9	18	--	CTR HH
Toluene	ug/L	200,000	400,000	--	CTR HH
1,2-Trans-Dichloroethylene	ug/L	140,000	280,000	--	CTR HH
1,1,2-Trichloroethane	ug/L	42	84	--	CTR HH
Trichloroethylene	ug/L	81	160	--	CTR HH
Vinyl Chloride	ug/L	530	1,100	--	CTR HH
2-Chlorophenol	ug/L	400	800	--	CTR HH
2,4-Dichlorophenol	ug/L	790	1,600	--	CTR HH
2,4-Dimethylphenol	ug/L	2,300	4,600	--	CTR HH
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	765	1,500	--	CTR HH
2,4-Dinitrophenol	ug/L	14,000	28,000	--	CTR HH
Pentachlorophenol	ug/L	4.3	8.7	--	CTR HH
Phenol	ug/L	4,600,000	9,000,000	--	CTR HH
2,4,6-Trichlorophenol	ug/L	6.5	13	--	CTR HH
Acenaphthene	ug/L	2,700	5,400	--	CTR HH
Anthracene	ug/L	110,000	220,000	--	CTR HH
Benzidine	ug/L	0.00054	0.0011	--	CTR HH
Benzo(a)Anthracene	ug/L	0.049	0.098	--	CTR HH
Benzo(a)Pyrene	ug/L	0.049	0.098	--	CTR HH
Benzo(b)Fluoranthene	ug/L	0.049	0.098	--	CTR HH
Benzo(k)Fluoranthene	ug/L	0.049	0.098	--	CTR HH
Bis(2-Chloroethyl)Ether	ug/L	1.4	2.8	--	CTR HH
Bis(2-Chloroisopropyl)Ether	ug/L	170,000	340,000	--	CTR HH
Bis(2-Ethylhexyl)Phthalate	ug/L	5.9	12	--	CTR HH
Butylbenzyl Phthalate	ug/L	5,200	10,000	--	CTR HH
2-Chloronaphthalene	ug/L	4,300	8,600	--	CTR HH
Chrysene	ug/L	0.049	0.098	--	CTR HH
Dibenzo(a,h)Anthracene	ug/L	0.049	0.098	--	CTR HH
1,2-Dichlorobenzene	ug/L	17,000	34,000	--	CTR HH
1,3-Dichlorobenzene	ug/L	2,600	5,200	--	CTR HH
1,4-Dichlorobenzene	ug/L	2,600	52,00	--	CTR HH
3,3 Dichlorobenzidine	ug/L	0.077	0.15	--	CTR HH
Diethyl Phthalate	ug/L	120,000	240,000	--	CTR HH

Parameter	Unit	Effluent Limitations			Basis
		AMEL	MDEL	Instantaneous Maximum	
Dimethyl Phthalate	ug/L	2,900,000	5,800,000	--	CTR HH
Di-n-Butyl Phthalate	ug/L	12,000	24,000	--	CTR HH
2,4-Dinitrotoluene	ug/L	9.1	18	--	CTR HH
1,2-Diphenylhydrazine	ug/L	0.54	1.1	--	CTR HH
Fluoranthene	ug/L	370	740	--	CTR HH
Fluorene	ug/L	14,000	28,000	--	CTR HH
Hexachlorobenzene	ug/L	0.00077	0.0015	--	CTR HH
Hexachlorobutadiene	ug/L	50	100	--	CTR HH
Hexachlorocyclopentadiene	ug/L	17,000	34,000	--	CTR HH
Hexachloroethane	ug/L	8.9	18	--	CTR HH
Indeno(1,2,3-cd)Pyrene	ug/L	0.049	0.098	--	CTR HH
Isophorone	ug/L	600	1,200	--	CTR HH
Nitrobenzene	ug/L	1,900	3,800	--	CTR HH
N-Nitrosodimethylamine	ug/L	8.1	16	--	CTR HH
N-Nitrosodi-n-Propylamine	ug/L	1.4	2.8	--	CTR HH
Pyrene	ug/L	11,000	22,000	--	CTR HH
Aldrin	ug/L	0.00014	0.00028	--	CTR HH
alpha-BHC	ug/L	0.013	0.026	--	CTR HH
beta-BHC	ug/L	0.046	0.092	--	CTR HH
gamma-BHC	ug/L	0.063	0.13	--	CTR HH
Chlordane	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDT	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDE (linked to DDT)	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDD	ug/L	0.00084	0.0017	--	CTR HH
Dieldrin	ug/L	0.00014	0.00028	--	CTR HH
alpha-Endosulfan	ug/L	0.046	0.091	--	CTR HH
beta-Endosulfan	ug/L	0.046	0.091	--	CTR HH
Endosulfan Sulfate	ug/L	240	481	--	CTR HH
Endrin	ug/L	0.029	0.059	--	CTR AL
Endrin Aldehyde	ug/L	0.81	1.6	--	CTR HH
Heptachlor	ug/L	0.0002	0.0004	--	CTR HH
Heptachlor Epoxide	ug/L	0.00011	0.00022	--	CTR HH
PCBs sum	ug/L	0.00017	0.00034	--	CTR HH
Toxaphene	ug/L	0.00016	0.00033	--	CTR AL

MCL – Maximum Contaminant Levels
CTR HH – California Toxics Rule, Human Health Criteria
CTR AL – California Toxics Rule, Aquatic Life Criteria

[1] In addition to an instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time.

[2] As specified in section IV of the MRP, Attachment E of this permit.

[3] Within the limits of 6.5 and 8.5 s.u. at all times.

[4] Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 in waters with cold fresh-water habitat beneficial use.

e. Effluent Limitations – Saltwater Inland Surface Waters, Not Including Bays and Estuaries

Freshwater criteria apply where receiving water salinities are 1 part per thousand and below and at locations where this occurs 95% or more of the time. Saltwater criteria apply at receiving water salinities of 10 part per thousand and above and at locations where this occurs 95% of the time. Where receiving water salinities are between 1 and 10 parts per thousand the more stringent of freshwater or saltwater criteria applies. Discharges to inland saltwater receiving waters, but not including bays and estuaries, shall not exceed the effluent limitations specified below.

Table F-8. Effluent Limits for Discharges to Saltwater Inland Surface Waters, not Including Bays and Estuaries

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Insantaneous. Maximum	
Applicable to All Dischargers					
Settleable Solids	ml/L	0.1	--	0.2	Previous Order
Total Suspended Solids	mg/L	30	--	50	Previous Order
Turbidity	NTU	--	--	20[1]	Basin Plan
Chronic Toxicity	Pass/Fail	--	Pass[2]	--	Basin Plan
pH	s.u.	--	--	6.5 – 8.5[3]	Basin Plan
Based on Results of Reasonable Potential Analysis					
Hydrogen Sulfide	µg/L	2.0	4.0	10	Previous Order
Xylene	µg/L	--	--	5.0	Previous Order
Chlorinated Phenolics	µg/L	--	--	10	Previous Order
Remaining Base/Neutral Compounds	µg/L	--	--	10	Previous Order
Total Petroleum Hydrocarbons	mg/L	--	--	0.5	Previous Order
Percent Sodium	%	--	--	60	Basin Plan
Total Nitrogen	mg/L	1.0	--	2.0	Basin Plan
Total Phosphorus	mg/L	0.1	--	0.2	Basin Plan
Methylene Blue Active Substances (MBAS)	mg/L	--	--	0.5	Basin Plan
Fluoride	mg/L	--	--	1.0	Basin Plan
Total Residual Chlorine	µg/L	2.0	8.0	10	Previous Order
Dissolved Oxygen	mg/L	--	--	5.0/6.0[4]	Basin Plan
Iron, Total Recoverable	mg/L			0.3	Previous Order/MCL
Manganese, Total Recoverable	mg/L			0.05	Previous Order/MCL
Total Coliform	MPN/100 mL	--	--	1,000	Previous Order
Fecal Coliform	MPN/100 mL	--	--	200	Previous Order
Dibromochloropropane	µg/L	--	--	0.2	Previous

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Insantaneous. Maximum	
					Order/MCL
Ethylene Dibromide	µg/L	--	--	0.02	Previous Order/MCL
Antimony, Total Recoverable	ug/L	4,300	8,600	--	CTR HH
Arsenic, Total Recoverable	ug/L	30	59	--	CTR AL
Cadmium, Total Recoverable	ug/L	7.7	1.5	--	CTR AL
Chromium (VI) , Total Recoverable	ug/L	41	83	--	CTR AL
Copper, Total Recoverable	ug/L	2.9	5.8	--	CTR AL
Lead, Total Recoverable	ug/L	7.0	14	--	CTR AL
Mercury, Total Recoverable	ug/L	0.051	0.01	--	CTR HH
Nickel, Total Recoverable	ug/L	6.8	14	--	CTR AL
Selenium, Total Recoverable	ug/L	58	117	--	CTR AL
Silver, Total Recoverable	ug/L	1.1	2.2	--	CTR AL
Thallium, Total Recoverable	ug/L	6.3	13	--	CTR HH
Zinc, Total Recoverable	ug/L	47	95	--	CTR AL
Cyanide, Total	ug/L	0.50	1	--	CTR AL
2,3,7,8 TCDD	ug/L	1.4E-08	2.8E-08	--	CTR HH
TCDD Equivalents	ug/L	1.4E-08	2.8E-08	--	CTR HH
Acrolein	ug/L	780	1,600	--	CTR HH
Acrylonitrile	ug/L	0.66	1.3	--	CTR HH
Benzene	ug/L	71	140	--	CTR HH
Bromoform	ug/L	360	720	--	CTR HH
Carbon Tetrachloride	ug/L	4.4	8.8	--	CTR HH
Chlorobenzene	ug/L	21,000	42,000	--	CTR HH
Chlorodibromomethane	ug/L	34	68	--	CTR HH
Dichlorobromomethane	ug/L	46	92	--	CTR HH
1,2-Dichloroethane	ug/L	99	200	--	CTR HH
1,1-Dichloroethylene	ug/L	3.2	6.4	--	CTR HH
1,2-Dichloropropane	ug/L	39	78	--	CTR HH
1,3-Dichloropropylene	ug/L	1,700	3,400	--	CTR HH
Ethylbenzene	ug/L	29,000	58,000	--	CTR HH
Methyl Bromide	ug/L	4,000	8,000	--	CTR HH
Methylene Chloride	ug/L	1,600	3,200	--	CTR HH
1,1,2,2-Tetrachloroethane	ug/L	11	22	--	CTR HH
Tetrachloroethylene	ug/L	8.9	18	--	CTR HH
Toluene	ug/L	200,000	400,000	--	CTR HH
1,2-Trans-Dichloroethylene	ug/L	140,000	280,000	--	CTR HH
1,1,2-Trichloroethane	ug/L	42	84	--	CTR HH
Trichloroethylene	ug/L	81	160	--	CTR HH
Vinyl Chloride	ug/L	530	1,000	--	CTR HH
2-Chlorophenol	ug/L	400	800	--	CTR HH
2,4-Dichlorophenol	ug/L	790	1,600	--	CTR HH

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Insantaneous. Maximum	
2,4-Dimethylphenol	ug/L	2,300	4,600	--	CTR HH
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	770	1,500	--	CTR HH
2,4-Dinitrophenol	ug/L	14,000	28,000	--	CTR HH
Pentachlorophenol	ug/L	6.5	13	--	CTR AL
Phenol	ug/L	4,600,000	9,000,000	--	CTR HH
2,4,6-Trichlorophenol	ug/L	6.5	13	--	CTR HH
Acenaphthene	ug/L	2,700	5,400	--	CTR HH
Anthracene	ug/L	110,000	220,000	--	CTR HH
Benzidine	ug/L	0.00054	0.0011	--	CTR HH
Benzo(a)Anthracene	ug/L	0.049	0.098	--	CTR HH
Benzo(a)Pyrene	ug/L	0.049	0.098	--	CTR HH
Benzo(b)Fluoranthene	ug/L	0.049	0.098	--	CTR HH
Benzo(k)Fluoranthene	ug/L	0.049	0.098	--	CTR HH
Bis(2-Chloroethyl)Ether	ug/L	1.4	2.8	--	CTR HH
Bis(2-Chloroisopropyl)Ether	ug/L	170,000	340,000	--	CTR HH
Bis(2-Ethylhexyl)Phthalate	ug/L	5.9	12	--	CTR HH
Butylbenzyl Phthalate	ug/L	5,200	10,000	--	CTR HH
2-Chloronaphthalene	ug/L	4,300	8,600	--	CTR HH
Chrysene	ug/L	0.049	0.098	--	CTR HH
Dibenzo(a,h)Anthracene	ug/L	0.049	0.098	--	CTR HH
1,2-Dichlorobenzene	ug/L	17,000	34,000	--	CTR HH
1,3-Dichlorobenzene	ug/L	2,600	5,200	--	CTR HH
1,4-Dichlorobenzene	ug/L	2,600	5,200	--	CTR HH
3,3 Dichlorobenzidine	ug/L	0.077	0.15	--	CTR HH
Diethyl Phthalate	ug/L	120,000	240,000	--	CTR HH
Dimethyl Phthalate	ug/L	2,900,000	5,800,000	--	CTR HH
Di-n-Butyl Phthalate	ug/L	12,000	24,000	--	CTR HH
2,4-Dinitrotoluene	ug/L	9.1	18	--	CTR HH
1,2-Diphenylhydrazine	ug/L	0.54	1.1	--	CTR HH
Fluoranthene	ug/L	370	740	--	CTR HH
Fluorene	ug/L	14,000	28,000	--	CTR HH
Hexachlorobenzene	ug/L	0.00077	0.0015	--	CTR HH
Hexachlorobutadiene	ug/L	50	100	--	CTR HH
Hexachlorocyclopentadiene	ug/L	17,000	34,000	--	CTR HH
Hexachloroethane	ug/L	8.9	18	--	CTR HH
Indeno(1,2,3-cd)Pyrene	ug/L	0.049	0.098	--	CTR HH
Isophorone	ug/L	600	1,200	--	CTR HH
Nitrobenzene	ug/L	1,900	3,800	--	CTR HH
N-Nitrosodimethylamine	ug/L	8.1	16	--	CTR HH
N-Nitrosodi-n-Propylamine	ug/L	1.4	2.8	--	CTR HH
N-Nitrosodiphenylamine	ug/L	16	32	--	CTR HH
Pyrene	ug/L	11,000	22,000	--	CTR HH

Parameters	Units	Effluent Limitations			Basis
		AMEL	MDEL	Insantaneous. Maximum	
Aldrin	ug/L	0.00014	0.00028	--	CTR HH
alpha-BHC	ug/L	0.013	0.026	--	CTR HH
beta-BHC	ug/L	0.046	0.092	--	CTR HH
gamma-BHC	ug/L	0.063	0.13	--	CTR HH
Chlordane	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDT	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDE (linked to DDT)	ug/L	0.00059	0.0012	--	CTR HH
4,4'-DDD	ug/L	0.00084	0.0017	--	CTR HH
Dieldrin	ug/L	0.00014	0.00028	--	CTR HH
alpha-Endosulfan	ug/L	0.0071	0.014	--	CTR AL
beta-Endosulfan	ug/L	0.0071	0.014	--	CTR AL
Endosulfan Sulfate	ug/L	240	480	--	CTR HH
Endrin	ug/L	0.0018	0.0038	--	CTR AL
Endrin Aldehyde	ug/L	0.81	1.6	--	CTR HH
Heptachlor	ug/L	0.00021	0.00042	--	CTR HH
Heptachlor Epoxide	ug/L	0.00011	0.00022	--	CTR HH
PCBs sum	ug/L	0.00017	0.00034	--	CTR HH
Toxaphene	ug/L	0.00016	0.00032	--	CTR AL

MCL – Maximum Contaminant Levels
CTR HH – California Toxics Rule, Human Health Criteria
CTR AL – California Toxics Rule, Aquatic Life Criteria
[1] In addition to an instantaneous maximum of 20 NTU, the discharge shall not exceed the ambient turbidity of the surface water at any time.
[2] As specified in section IV of the MRP, Attachment E of this permit.
[3] Within the limits of 6.5 and 8.5 s.u. at all times.
[4] Shall not be less than 5.0 at any time in waters with designated warm fresh-water habitat beneficial use or less than 6.0 in waters with cold fresh-water habitat beneficial use.

f. Effluent Limitations - Bays and Estuaries, not including Buena Vista Lagoon

i. Discharges to bays and estuaries, not including Buena Vista Lagoon, shall not exceed the effluent limitations specified below.

Table F-9. Effluent Limits for Discharges to Bays and Estuaries, not Including Buena Vista Lagoon

Parameters	Units	Effluent Limitations					Basis
		AMEL	AWEL	MDEL	Inst. Max[1]	6-Month Median	
Applicable to All Dischargers							
Settleable Solids	ml/L	1.0	1.5	--	3.0	--	Previous Order/Ocean Plan
Total Suspended Solids	mg/L	30	--	--	50	--	Previous Order
Turbidity	NTU	75	100	--	225	--	Ocean Plan
Chronic Toxicity	Pass/Fail	--	--	Pass[2]	--	--	Basin Plan
pH	s.u.	--	--	--	6.0 – 9.0[3] 7.0 – 8.5	--	Basin Plan
Based on Results of Reasonable Potential Analysis							
Hydrogen Sulfide	µg/L	2.0	--	4.0	10	--	Previous Order
Xylene	µg/L	--	--	--	5.0	--	Previous Order
Chlorinated Phenolics	µg/L	--	--	4.0	10	1.0	Ocean Plan
Base/Neutral Compounds[4]	µg/L	--	--	--	10	--	Previous Order
Total Petroleum Hydrocarbons	µg/L	--	--	--	500	--	Previous Order
Total Residual Chlorine	µg/L	--		8.0	60	2.0	Ocean Plan
Ammonia, Total	µg/L	--	--	2,400	6,000	600	Ocean Plan
Total Nitrogen	mg/L	--	--	--	2.0	1.0	Basin Plan
Total Phosphorus	mg/L	--	--	--	0.2	0.1	Basin Plan
Dissolved Oxygen	mg/L	--	--	--	5.0[5]	--	Basin Plan
Methyl-tert-butyl Ether	µg/L	--	--	--	5.0	--	Previous Order/MCL
Antimony, Total Recoverable	ug/L	4,300	--	8,600	--	--	CTR HH
Arsenic, Total Recoverable	ug/L	30	--	59	--	--	CTR AL
Cadmium , Total Recoverable	ug/L	7.7	--	15	--	--	CTR AL
Chromium (VI), Total Recoverable	ug/L	41	--	83	--	--	CTR AL
Copper, Total Recoverable	ug/L	2.9	--	5.8	--	--	CTR AL
Lead, Total Recoverable	ug/L	7.0	--	14	--	--	CTR AL
Mercury, Total Recoverable	ug/L	0.051	--	0.1	--	--	CTR HH
Nickel, Total Recoverable	ug/L	6.8	--	14	--	--	CTR AL
Selenium, Total Recoverable	ug/L	58	--	120	--	--	CTR AL
Silver, Total Recoverable	ug/L	1.1	--	2.2	--	--	CTR AL
Thallium, Total Recoverable	ug/L	6.3	--	13	--	--	CTR HH
Tributyltin	µg/L	0.0014	--	--	--	--	Ocean Plan
Zinc, Total Recoverable	ug/L	47	--	95	--	--	CTR AL

Parameters	Units	Effluent Limitations					Basis
		AMEL	AWEL	MDEL	Inst. Max[1]	6-Month Median	
Cyanide, total	ug/L	0.50	--	1.00	--	--	CTR AL
TCDD Equivalents[6]	ug/L	3.90E-09	--	--	--	--	Ocean Plan
Acrolein	ug/L	780	--	1,600	--	--	CTR HH
Acrylonitrile	ug/L	0.66	--	1.3	--	--	CTR HH
Benzene	ug/L	--	--	--	5.0	--	Previous Order
Carbon Tetrachloride	ug/L	0.9	--	--	--	--	Ocean Plan
Chlorobenzene	ug/L	2,100	--	42,000	--	--	CTR HH
Chlorodibromomethane	ug/L	34	--	68	--	--	CTR HH
Dichlorobromomethane	ug/L	46	--	92	--	--	CTR HH
Dichloromethane	µg/L	450[OP]	--	--	5.0[AB]	--	Previous Order/Ocean Plan
1,2-Dichloroethane	ug/L	28	--	--	--	--	Ocean Plan
1,1-Dichloroethylene	ug/L	3.2	--	6.4	--	--	CTR HH
1,2-Dichloropropane	ug/L	39	--	78	--	--	CTR HH
1,3-Dichloropropylene	ug/L	1,700	--	3,400	--	--	CTR HH
Ethylbenzene	ug/L	--	--	--	5.0	--	Previous Order
Phenolic Compounds (non-chlorinated)	µg/L	--	--	1202	300	30	Ocean Plan
1,1,2,2-Tetrachloroethane	ug/L	2.3	--	--	--	--	Ocean Plan
Tetrachloroethylene	ug/L	2.0	--	--	--	--	Ocean Plan
Toluene	ug/L	--	--	--	5.0	--	Previous Order
1,2-Trans-Dichloroethylene	ug/L	140,000	--	280,000	--	--	CTR HH
1,1,1-trichloroethane	µg/L	540,000	--	--	--	--	Ocean Plan
1,1,2-Trichloroethane	ug/L	9.4	--	--	--	--	Ocean Plan
Trichloroethylene	ug/L	27	--	--	--	--	Ocean Plan
Vinyl Chloride	ug/L	36	--	--	--	--	Ocean Plan
Chlorophenol	ug/L	400	--	800	--	--	CTR HH
2,4-Dichlorophenol	ug/L	790	--	1,600	--	--	CTR HH
2,4-Dimethylphenol	ug/L	2,300	--	4,600	--	--	CTR HH
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	770	--	1,500	--	--	CTR HH
2,4-Dinitrophenol	ug/L	14,000	--	28,000	--	--	CTR HH
Pentachlorophenol	ug/L	6.5	--	13	--	--	CTR HH
Phenol	ug/L	4,600,00	--	9,200,000	--	--	CTR HH
2,4,6-Trichlorophenol	ug/L	6.5	--	13	--	--	CTR HH
Acenaphthene	ug/L	2,700	--	5,400	--	--	CTR HH
Anthracene	ug/L	110,000	--	220,000	--	--	CTR HH
Benzidine	ug/L	0.00054	--	0.0011	--	--	CTR HH
Benzo(a)Anthracene	ug/L	0.049	--	0.098	--	--	CTR HH
Benzo(a)Pyrene	ug/L	0.049	--	0.098	--	--	CTR HH
Benzo(b)Fluoranthene	ug/L	0.049	--	0.098	--	--	CTR HH

Parameters	Units	Effluent Limitations					Basis
		AMEL	AWEL	MDEL	Inst. Max[1]	6-Month Median	
Benzo(k)Fluoranthene	ug/L	0.049	--	0.098	--	--	CTR HH
Bis(2-Chloroethyl)Ether	ug/L	1.4	--	2.8	--	--	CTR HH
Bis(2-Chloroisopropyl)Ether	ug/L	170,000	--	340,000	--	--	CTR HH
Bis(2-Ethylhexyl)Phthalate	ug/L	5.9	--	12	--	--	CTR HH
Butylbenzyl Phthalate	ug/L	5,200	--	10,000	--	--	CTR HH
2-Chloronaphthalene	ug/L	4,300	--	8,600	--	--	CTR HH
Chrysene	ug/L	0.049	--	0.098	--	--	CTR HH
Dibenzo(a,h)Anthracene	ug/L	0.049	--	0.098	--	--	CTR HH
1,2-Dichlorobenzene	ug/L	17,000	--	34,000	--	--	CTR HH
1,3-Dichlorobenzene	ug/L	2,600	--	5,200	--	--	CTR HH
1,4-Dichlorobenzene	ug/L	2,600	--	5,200	--	--	CTR HH
3,3 Dichlorobenzidine	ug/L	0.077	--	0.15	--	--	CTR HH
Diethyl Phthalate	ug/L	120,000	--	240,000	--	--	CTR HH
Dimethyl Phthalate	ug/L	2,900,000	--	5,800,000	--	--	CTR HH
Di-n-Butyl Phthalate	ug/L	12,000	--	24,000	--	--	CTR HH
2,4-Dinitrotoluene	ug/L	9.1	--	18	--	--	CTR HH
1,2-Diphenylhydrazine	ug/L	0.51	--	1.1	--	--	CTR HH
Fluoranthene	ug/L	370	--	740	--	--	CTR HH
Fluorene	ug/L	14,000	--	28,000	--	--	CTR HH
Hexachlorobenzene	ug/L	0.00077	--	0.0015	--	--	CTR HH
Hexachlorobutadiene	ug/L	50	--	100	--	--	CTR HH
Hexachlorocyclopentadiene	ug/L	17,000	--	3,400	--	--	CTR HH
Hexachloroethane	ug/L	8.9	--	18	--	--	CTR HH
Indeno(1,2,3-cd)Pyrene	ug/L	0.049	--	0.098	--	--	CTR HH
Isophorone	ug/L	600	--	1,200	--	--	CTR HH
Nitrobenzene	ug/L	1,900	--	3,800	--	--	CTR HH
N-Nitrosodimethylamine	ug/L	8.1	--	16	--	--	CTR HH
N-Nitrosodi-n-Propylamine	ug/L	1.4	--	2.8	--	--	CTR HH
N-Nitrosodiphenylamine	ug/L	16	--	32	--	--	CTR HH
Polynuclear Aromatic Hydrocarbons (PAHs)[7]	µg/L	0.088	--	--	--	--	Ocean Plan
Pyrene	ug/L	11,000	--	22,000	--	--	CTR HH
Aldrin	ug/L	0.00014	--	0.00028	--	--	CTR HH
Chlordane[8]	ug/L	0.00059	--	0.0012	--	--	CTR HH
4,4'-DDT	ug/L	0.00059	--	0.0012	--	--	CTR HH
4,4'-DDE (linked to DDT)	ug/L	0.00059	--	0.0012	--	--	CTR HH
4,4'-DDD	ug/L	0.00084	--	00.0017	--	--	CTR HH
Dieldrin	ug/L	0.00014	--	0.00028	--	--	CTR HH
Endosulfan	ug/L	--	--	0.018	0.027	0.009	Ocean Plan
Endrin	ug/L	0.0023	--	0.0038	--	--	CTR HH
Endrin Aldehyde	ug/L	0.81	--	1.63	--	--	CTR HH
Halomethanes[9]	µg/L	--	--	--	5.0	--	Previous Order
Heptachlor	ug/L	0.00021	--	0.00042	--	--	CTR HH

Parameters	Units	Effluent Limitations					Basis
		AMEL	AWEL	MDEL	Inst. Max[1]	6-Month Median	
Heptachlor Epoxide	ug/L	0.00011	--	0.00022	--	--	CTR HH
Hexachlorocyclohexane (HCH)[10]	µg/L	--	--	0.008	0.012	0.004	Ocean Plan
PCBs sum[11]	ug/L	0.00017	--	0.00034	--	--	CTR HH
Toxaphene	ug/L	0.00020	--	0.00033	--	--	CTR AL

MCL – Maximum Contaminant Levels
CTR HH – California Toxics Rule, Human Health Criteria
CTR AL – California Toxics Rule, Aquatic Life Criteria

[1] Instantaneous Maximum Effluent Limitation.

[2] As specified in section IV of the MRP, Attachment E of this Order.

[3] All bays and harbors shall be within 6.0 and 9.0 standard units at all times. All saline lagoons (all lagoons with the exception of Buena Vista Lagoon) and estuaries of the region shall be within 7.0 and 8.5 standard units at all times.

[4] As defined using Method 6410.

[5] Applied as an instantaneous minimum effluent limitation.

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

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

[7] Polynuclear Aromatic Hydrocarbons (PAHs) shall meanthe sum of acenaphthylene, anthracene, 1,2-benzanthracene, 3,4-benzofluoranthene, benzo[k]fluoranthene, 1,12-benzoperylene, benzo[a]pyrene, chrysene, dibenzo[ah]anthracene, fluorene, indeno[1,2,3-cd]pyrene, phenanthrene, and pyrene.

[8] Chlordane shall maen the sum of chlordane-alpha, chlordane-gamma, nonachlor-alpha, nonachlor-gamma, and oxychlordane.

[9] Halomethanes shall mean the sum of bromoform, bromethane, and chloromethane.

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

[11] PCBs sum shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of aroclor-1221, aroclor-1232, aroclor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

ii. Discharges to bays and estuaries, not including Buena Vista Lagoon, shall not exceed the effluent limitations for bacteria specified below:

1) 30-day geometric mean limitations:

(a) Total coliform - 1,000/100 mL
(b) Fecal coliform - 200/100 mL
(c) Enterococcus - 35/100 mL

2) Single sample maximum limitations:

(a) Total coliform – 10,000/100 mL
(b) Fecal coliform – 400/100 mL
(c) Enterococcus – 104/100 mL

g. Effluent Limitations – Surf Zone of the Pacific Ocean

i. Discharges to the surf zone of the Pacific Ocean shall not exceed the effluent limitations specified below.

Table F-10. Effluent Limits for Discharges to the Surf Zone of the Pacific Ocean

Parameter	Units	Effluent Limitations					Basis
		AMEL	AWEL	6-month median	Daily max	Inst. Max.[1]	
Applicable to All Dischargers							
Grease and Oil	mg/L	25	40	--	--	75	Ocean Plan
Suspended Solids	mg/L	60[3]	--	--	--	--	Ocean Plan
Settleable Solids	mL/L	1.0	1.5	--	--	3.0	Ocean Plan
Turbidity	NTU	75	100	--	--	225	Ocean Plan
pH	s.u.	--	--	--	--	6.0 – 9.0	Ocean Plan
Based on Results of Reasonable Potential Analysis							
Dissolved Oxygen	mg/L	--	--	--	--	5.0[2]	Previous Order
Arsenic, Total Recoverable	ug/l	--	--	23	120	310	Ocean Plan
Cadmium, Total Recoverable	ug/l	--	--	4	16	40	Ocean Plan
Chromium VI, Total Recoverable	ug/l	--	--	8	32	80	Ocean Plan
Copper, Total Recoverable	ug/l	--	--	6	42	110	Ocean Plan
Lead, Total Recoverable	ug/l	--	--	8	32	80	Ocean Plan
Mercury, Total Recoverable	ug/l	--	--	0.16	0.64	1.6	Ocean Plan
Nickel, Total Recoverable	ug/l	--	--	20	80	200	Ocean Plan
Selenium, Total Recoverable	ug/l	--	--	60	240	600	Ocean Plan
Silver, Total Recoverable	ug/l	--	--	2.3	11	28	Ocean Plan
Zinc, Total Recoverable	ug/l	--	--	56	300	780	Ocean Plan
Cyanide, Total	ug/l	--	--	4	16	40	Ocean Plan
Total Chlorine Residual	ug/l	--	--	8	32	240	Ocean Plan
Ammonia (expressed as nitrogen)	ug/l	--	--	2,400	9,600	24,000	Ocean Plan
Acute Toxicity[10]	TUa	--	--	NA	0.3	NA	Ocean Plan
Chronic Toxicity[10]	TUc	--	--	NA	1	NA	Ocean Plan
Phenolic Compounds (non-chlorinated)	ug/l	--	--	120	480	1,200	Ocean Plan
Chlorinated Phenolics	ug/l	--	--	4	16	40	Ocean Plan

Parameter	Units	Effluent Limitations					Basis
		AMEL	AWEL	6-month median	Daily max	Inst. Max.[1]	
Endosulfan	ug/l	--	--	0.036	0.072	0.108	Ocean Plan
Endrin	ug/l	--	--	0.008	0.016	0.024	Ocean Plan
Hexachlorocyclohexane (HCH)[4]	ug/l	--	--	0.016	0.032	0.048	Ocean Plan
Acrolein	ug/l	880	--	--	--	--	Ocean Plan
Antimony	ug/l	4,800	--	--	--	--	Ocean Plan
Bis(2-chloroethoxy) Methane	ug/l	18	--	--	--	--	Ocean Plan
Bis(2-chloroisopropyl) ether	ug/l	4,800	--	--	--	--	Ocean Plan
Chlorobenzene	ug/l	2,300	--	--	--	--	Ocean Plan
Chromium (III)	ug/l	760,000	--	--	--	--	Ocean Plan
Di-n-butyl Phthalate	ug/l	14,000	--	--	--	--	Ocean Plan
Dichlorobenzenes	ug/l	20,000	--	--	--	--	Ocean Plan
Diethyl Phthalate	ug/l	130,000	--	--	--	--	Ocean Plan
Dimethyl Phthalate	ug/l	3,300,000	--	--	--	--	Ocean Plan
4,6-dinitro-2-methylphenol	ug/l	880	--	--	--	--	Ocean Plan
2,4-dinitrophenol	ug/l	16	--	--	--	--	Ocean Plan
Ethylbenzene	ug/l	16,000	--	--	--	--	Ocean Plan
Fluoranthene	ug/l	60	--	--	--	--	Ocean Plan
Hexachlorocyclopentadiene	ug/l	230	--	--	--	--	Ocean Plan
Nitrobenzene	ug/l	20	--	--	--	--	Ocean Plan
Thallium	ug/l	8	--	--	--	--	Ocean Plan
Toluene	ug/l	340,000	--	--	--	--	Ocean Plan
Total Petroleum Hydrocarbons	µg/L	--	--	--	--	500	Ocean Plan
Tributyltin	ug/l	0.0056	--	--	--	--	Ocean Plan
1,1,1-trichloroethane	ug/l	2,200,000	--	--	--	--	Ocean Plan
Xylene	µg/	--	--	--	--	5.0	Ocean Plan
Acrylonitrile	ug/l	0.4	--	--	--	--	Ocean Plan
Aldrin	ug/l	0.000088	--	--	--	--	Ocean Plan
Benzene	ug/l	24	--	--	--	--	Ocean Plan
Benzidine	ug/l	0.00028	--	--	--	--	Ocean Plan
Beryllium	ug/l	0.13	--	--	--	--	Ocean Plan
Bis(2-chloroethyl) Ether	ug/l	0.18	--	--	--	--	Ocean Plan
Bis(2-ethlyhexyl) Phthalate	ug/l	14	--	--	--	--	Ocean Plan
Carbon Tetrachloride	ug/l	3.6	--	--	--	--	Ocean Plan
Chlordane[5]	ug/l	0.000092	--	--	--	--	Ocean Plan
Chlorodibromethane	ug/l	34	--	--	--	--	Ocean Plan
Chloroform	ug/l	520	--	--	--	--	Ocean Plan
DDT[6]	ug/l	0.00068	--	--	--	--	Ocean Plan
1,4-dichlorobenzene	ug/l	72	--	--	--	--	Ocean Plan
3,3'-dichlorobenzidine	ug/l	0.032	--	--	--	--	Ocean Plan
1,2-dichloroethane	ug/l	110	--	--	--	--	Ocean Plan
1,1-dichloroethylene	ug/l	3.6	--	--	--	--	Ocean Plan

Parameter	Units	Effluent Limitations					Basis
		AMEL	AWEL	6-month median	Daily max	Inst. Max.[1]	
Dichlorobromomethane	ug/l	25	--	--	--	--	Ocean Plan
Dichloromethane	ug/l	1,800	--	--	--	--	Ocean Plan
1,3-dichloropropene	ug/l	36	--	--	--	--	Ocean Plan
Dieldrin	ug/l	0.00016	--	--	--	--	Ocean Plan
2,4-dinitrotoluene	ug/l	10	--	--	--	--	Ocean Plan
1,2-diphenylhydrazine	ug/l	0.64	--	--	--	--	Ocean Plan
Halomethanes[7]	ug/l	520	--	--	--	--	Ocean Plan
Heptachlor	ug/l	0.0002	--	--	--	--	Ocean Plan
Heptachlor Epoxide	ug/l	0.00008	--	--	--	--	Ocean Plan
Hexachlorobenzene	ug/l	0.00084	--	--	--	--	Ocean Plan
Hexachlorobutadiene	ug/l	56	--	--	--	--	Ocean Plan
Hexachloroethane	ug/l	10	--	--	--	--	Ocean Plan
Isophorone	ug/l	2,900	--	--	--	--	Ocean Plan
N-nitrosodimethylamine	ug/l	29	--	--	--	--	Ocean Plan
N-nitrosodi-N-propylamine	ug/l	1.5	--	--	--	--	Ocean Plan
N-nitrosodiphenylamine	ug/l	10	--	--	--	--	Ocean Plan
Polynuclear Aromatic Hydrocarbons (PAHs)[8]	ug/l	0.035	--	--	--	--	Ocean Plan
PCBs[9]	ug/l	0.000076	--	--	--	--	Ocean Plan
TCDD equivalents[11]	ug/l	1.6E-08	--	--	--	--	Ocean Plan
1,1,2,2-tetrachloroethane	ug/l	9.2	--	--	--	--	Ocean Plan
Tetrachloroethylene	ug/l	8	--	--	--	--	Ocean Plan
Toxaphene	ug/l	0.00084	--	--	--	--	Ocean Plan
Trichloroethylene	ug/l	110	--	--	--	--	Ocean Plan
1,1,2-trichloroethane	ug/l	38	--	--	--	--	Ocean Plan
2,4,6-trichlorophenol	ug/l	1.2	--	--	--	--	Ocean Plan
Vinyl Chloride	ug/l	140	--	--	--	--	Ocean Plan

[1] Instantaneous maximum effluent limitation.

[2] Applied as an instantaneous minimum.

[3] The Discharger shall remove 75 percent of the suspended solids as a monthly average unless the average monthly influent is 80 mg/L or less, then the effluent limit shall be 60 mg/L.

[4] Hexachlorocyclohexane HCH shall mean the sum of the alpha, beta, gamma, and delta isomers of hexachlorocyclohexane.

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

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

[7] Halomethanes shall mean the sum of bromoform, bromomethane and chloromethane.

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

[9] PCBs shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of acroclor-1221, aroclor-1232, arochlor-1242, aroclor-1248, aroclor-1254, and aroclor-1260.

[10] As specified in section IV of the MRP, Attachment E of this Order.

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

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

ii. Discharges to bays and estuaries, not including Buena Vista Lagoon, shall not exceed the effluent limitations for bacteria specified below:

1) 30-day geometric mean limitations:

(a) Total coliform - 1,000/100 mL
(b) Fecal coliform - 200/100 mL
(c) Enterococcus - 35/100 mL

2) Single sample maximum limitations:

(a) Total coliform – 10,000/100 mL
(b) Fecal coliform – 400/100 mL
(c) Enterococcus – 104/100 mL

3) At all areas where shellfish may be harvested for human consumption, as determined by the San Diego Water Board, the monthly median total coliform density shall not exceed 70/100 mL, and not more than 10 percent of the samples shall exceed 230/100 mL.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

States are required to adopt numeric criteria where they are necessary to protect designated uses. (CWA sectionsection 303(a) – 303(c)). The San Diego Water Board adopted numeric criteria in the Basin Plan. Likewise, the State Water Board adopted numeric critera in the Ocean Plan. The Basin Plan and Ocean Plan are regulatory references for meeting the State and Federal requirements for water quality control (40 CFR section 131.20). State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that; “The numerical and narrative water quality objectives define the least stringent standards that the San Diego Water Board will apply to regional waters in order to protect the beneficial uses.”

Receiving water limitations of this Order are derived from the water quality objectives established in the Basin Plan and Ocean Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

40 CFR section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC 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 rationale for the monitoring and reporting requirements contained in the MRP for this Order is as follows.

A. Effluent Monitoring

Dischargers are required monitor the discharges covered under this Order to determine compliance with permit conditions. Specific monitoring requirements are in the MRP. The monitoring provisions require compliance with the MRP which is based on 40 CFR sections 122.44(i), 122.62, 122.63 and 124.5. A MRP is a standard requirement in all NPDES permits (including this Order issued by the San Diego Water Board). In addition to containing definitions of terms, the MRP specifies general sampling/analytical protocols and reporting requirements for reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the CWC, and San Diego Water Board policies.

Orders Nos. R9-2007-0034 and R9-2008-0002 established monitoring requirements based on categories of discharges (i.e., groundwater remediation for petroleum, urban discharges, short-term, etc.), flowrate, and if treatment was necessary to comply with effluent limitations.

Effluent monitoring requirements have been revised from Orders Nos. R9-2007-0034 and R9-2008-0002. As discussed elsewhere in this Fact Sheet, this Order requires an initial pollutant screening prior to a Discharger submitting an NOI and does not rely on discharge categories that may not correctly identify the pollutants of concern present in each discharge. This screening allows the San Diego Water Board to evaluate the necessity to establish effluent limitations and associated monitoring requirements for the individual parameters, and reduce or increase monitoring requirements as necessary to evaluate compliance with applicable effluent limitations based on water quality criteria/objectives.

Monitoring frequencies are based on discharge flow volume and compliance with applicable effluent limitations. Dischargers with flows greater than 100,000 GPD pose an increased risk to receiving waters as compared to lower flow discharges. As such, discharges greater than 100,000 GPD shall be monitored more frequently than lower volume discharges. However, after a period of demonstrated compliance, monitoring frequencies for most parameters may be reduced. Incorporating compliance history into the established monitoring frequencies ensures that groundwater treatment systems will be sufficiently monitored to identify non-compliance with applicable effluent limitations, and provides economic relief for Dischargers that have demonstrated the adequacy of their treatment systems by achieving consistent compliance with effluent limitations.

B. Receiving Water Monitoring

This Order establishes effluent limitations for hardness dependent metals. As such, receiving water monitoring requirements for hardness are established in this Order for discharges to freshwater receiving waters.

This Order incorporates the requirements of the Basin Plan for the Chollas Creek TMDL for copper, lead, and zinc (Resolution No. R9-2007-0043). Consistent with the requirements of the Basin Plan, this Order establishes receiving water monitoring for discharges to Chollas Creek for hardness, lead, and zinc.

Consistent with receiving water monitoring requirements established in Order Nos. R9-2007-0034 and R9-2008-0002, this Order requires receiving water monitoring for turbidity to evaluate compliance with applicable water quality objectives and the potential impacts to the receiving water at the point of discharge.

VII. PUBLIC PARTICIPATION

The San Diego Water Board considered the issuance of waste discharge requirements that will serve as a General NPDES permit for groundwater extraction discharges throughout the San Diego Region. In the adoption process for this Order, the San Diego Water Board staff developed tentative waste discharge requirements and encouraged public participation in the adoption process.

A. Notification of Interested Parties

The San Diego Water Board notified existing Dischargers and interested agencies and persons of its intent to prescribe WDRs for the discharge of extracted groundwater and provided an opportunity to submit written comments and recommendations. Notification was provided through the following: Published in the San Diego Union Tribune, posted on the San Diego Water Board website, and sent by e-mail on April 20, 2015.

The public had access to the agenda and any changes in dates and locations through the San Diego Water Board's website at:
http://www.waterboards.ca.gov/sandiego/

B. Written Comments

Interested persons were invited to submit written comments concerning the tentative WDRs. Comments were due, either delivered in person or by mail, to the Executive Office at the San Diego Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the San Diego Water Board, written comments were due at the San Diego Water Board offices by 5:00 p.m. on May 20, 2015.

C. Public Hearing

The San Diego Water Board held a public hearing on the tentative WDRs during its regular board meeting on the following date and time and at the following location:

Date: June 24, 2015
Time: 9:00 AM
Location: San Diego Water Board Office
Regional Board Meeting Room
2375 Northside Drive, Suite 100
San Diego, CA 92108

Interested persons were invited to attend. At the public hearing, the San Diego Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Waste Discharge Requirements Petitions

Any person aggrieved by this action of the San Diego Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and CCR, title 23, sections 2050 et seq. The State Water Board must receive the petition by 5:00 p.m., 30 calendar days after the adoption 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.

E. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected

at the address below 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 (619) 516-1990 or by mailing requests to:

California Regional Water Quality Control Board
San Diego Region
Attention: File Review Request
2375 Northside Drive, Suite 100
San Diego, CA 92108

The office is closed on weekends and on all state Holidays.

Before making a request to view public records at the San Diego Water Board office interested persons may wish to determine if the information is already available on the San Diego Water Board's website at http://www.waterboards.ca.gov/sandiego or the State Water Board's website at http://www.waterboards.ca.gov. For example the San Diego Water Board's website alphabetical index and the State Water Board's Website alphabetical index provide links to many volumes of key documents on the State and Regional Water Board's water quality programs.

The following is a partial list of the documents available:

- Board Meeting Agendas
- Board Meeting Minutes
- Adopted Orders
- Tentative Orders
- Basin Plan
- Ocean Plan.

New and updated information is frequently added to the aforementioned websites.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this Order should contact the San Diego Water Board, reference this Order, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to the San Diego Water Board at (619) 516-1990.

ATTACHMENT G – DISCHARGE PROHIBITIONS CONTAINED IN THE OCEAN PLAN AND BASIN PLAN

I. Ocean Plan Discharge Prohibitions

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

B. Waste shall not be discharged to designated Areas of Special Biological Significance (ASBS) except as provided in Chapter III.E. of the Ocean Plan.

C. 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.

D. The by-passing of untreated wastes containing concentrations of pollutants in excess of those of Table 1 or Table 2 [of the Ocean Plan] is prohibited.

II. Basin Plan Discharge Prohibitions

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

B. The discharge of waste to land, except as authorized by waste discharge requirements (WDRs) of the terms described in CWC section 13264 is prohibited.

C. The discharge of pollutants or dredged or fill material to waters of the U.S. except as authorized by an National Pollutant Discharge Elimination System (NPDES) permit or a dredged or fill material permit (subject to the exemption described in CWC section 13376) is prohibited.

D. 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 Water Board's Division of Drinking Water and the operating agency of the impacted reservoir; and the Discharger has an approved fail-safe long-term disposal alternative.

E. 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 stream flow 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 stream flow provided 100:1 dilution capability.

F. 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.

G. 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.

H. Any discharge to a storm water conveyance system that is not composed entirely of stormwater is prohibited unless authorized by the San Diego Water Board. [The federal regulations, 40

CFR section 122.26(b)(13), define storm water as storm water runoff, snow melt runoff, and surface runoff and drainage. 40 CFR section 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 fire fighting activities.] [Section 122.26 amended at 56 FR 56553, November 5, 1991; 57 FR 11412, April 2, 1992].

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

J. The discharge of industrial wastes to conventional septic tank/ subsurface disposal systems, except as authorized by the terms described in CWC section 13264, is prohibited.

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

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

M. 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.

N. 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.

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

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

Q. The discharge of treated sewage from vessels to portions of San Diego Bay that are less than 30 feet deep at MLLW is prohibited.

R. The discharge of treated sewage from vessels, which do not have a properly functioning U.S. Coast Guard certified Type 1 or Type II marine sanitation device, to portions of San Diego Bay that are greater than 30 feet deep at mean lower low water is prohibited.